

**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**



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Order Instituting Rulemaking to Continue  
Implementation and Administration, and Consider  
Further Development, of California Renewables  
Portfolio Standard Program.

**DRAFT 2022 RENEWABLES PORTFOLIO STANDARD PROCUREMENT PLAN OF  
RANCHO MIRAGE ENERGY AUTHORITY**

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Dated: June 30, 2022

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In accordance with the California Public Utilities Commission’s (“Commission”) March 30, 2021 *Assigned Commissioner and Assigned Administrative Law Judges’ Ruling Identifying Issues and Schedule of Review for 2022 Renewables Portfolio Standard Procurement Plans and Denying Joint IOUs’ Motion to File Advice Letters for Market Offer Process* (“ACR”), the City of Rancho Mirage, doing business as Rancho Mirage Energy Authority (“RMEA” or “the City”), hereby submits this Draft 2022 Renewables Portfolio Standard Procurement Plan (“RPS Procurement Plan”). As directed by the ACR, this RPS Procurement Plan includes responses for the issues expressed in sections 6.1-6.16 of the ACR.

RMEA notes that certain issues and requests in these ACR sections apply to the other retail sellers (electrical corporations and electric service providers), and do not extend to Community Choice Aggregators (“CCAs”). RMEA is nevertheless voluntarily responding to these ACR sections in the interest of transparency and to collaborate with the Commission. The submission of this RPS Procurement Plan pursuant to the ACR, however, should not be construed as a waiver of the right to assert that components of Senate Bill (“SB”) 350 or Commission decisions and rulings on RPS Procurement Plan submittals, do not extend to CCAs, and RMEA reserves the right to challenge any such assertion of jurisdiction over these matters.

As indicated in RMEA’s previously submitted RPS Procurement Plans, the Commission should consider the relatively small size and related administrative structure under which RMEA operates its CCA program. In particular, RMEA operates its CCA program under a shared service model, which means RMEA has joined together with other, regionally located CCA programs to promote administrative efficiencies by outsourcing many highly specialized services typically required for successful CCA administration and operation. The California Choice Energy Authority, or CalChoice, is a joint powers authority (“JPA”), the members of which include the cities of Lancaster and San Jacinto. CalChoice was formed to help cities in Southern California Edison’s (“SCE”) service territory evaluate, implement, and operate CCA enterprises without having to share or cede (by virtue of proportionate influence during decision making processes) control that could result from participation in larger, multi-jurisdictional JPAs or without independently taking on the significant financial liabilities (*e.g.*, start-up costs, staffing, and ongoing administration) of a single entity CCA. CalChoice is the organization selected by RMEA to provide requisite services and inter-agency coordination amongst regionally located, single-city CCA programs.

There are currently ten (10) Southern California communities that are being supported under independent administrative services agreements with CalChoice, including RMEA. These communities include the Town of Apple Valley (doing business as Apple Valley Choice Energy, or “AVCE”; successful CCA launch in April 2017); and the cities of Baldwin Park (formerly doing business as Baldwin Park Resident Owned Utility District, or “BPROUD,” which successfully commenced CCA service in October 2020, then later decided to terminate program operations through an orderly process that resulted in the return of its customers to SCE in March 2022), LCE (successful CCA launch in May 2015), Palmdale (doing business as Energy for

Palmdale’s Independent Choice, or “EPIC”; CCA launch is planned for October 2022), Pico Rivera (doing business as Pico Rivera Innovative Municipal Energy, or “PRIME,” which successfully commenced the delivery of CCA service in September 2017), Pomona (doing business as Pomona Clean Energy; successful launch in October 2020), Rancho Mirage (doing business as the Rancho Mirage Energy Authority; successful CCA launch in May 2018), San Jacinto (doing business as San Jacinto Power; successful CCA launch in April 2018) and Santa Barbara (doing business as Santa Barbara Clean Energy; successful CCA launch in October 2021). CalChoice’s team of experienced CCA practitioners works in cooperation with City and Town leadership to administer CCA operations. Responsibilities for CCA program management are divided, but closely coordinated, amongst these constituents. For example, CalChoice’s team provides key administrative support and advisory services, including the completion of work related to resource planning and procurement (*e.g.*, load forecasting, solicitation administration, contract negotiation support and, specifically related to this RPS Procurement Plan, the administration of functions required to plan for and procure requisite RPS-eligible renewable energy supply). City and Town staff, including elected leadership, take lead roles in reviewing and approving electric generation rates, adopting resource planning policies and creating, implementing and administering locally focused energy programs and, in certain cases, locally situated energy infrastructure projects that support CCA program operations and the interests of participating customers.

The CalChoice service model has not only proven to be highly desirable for many smaller Southern California communities but also critically important in preserving the community-specific oversight and decision-making autonomy that would not necessarily be afforded under a larger, multi-party joint powers agency. Key decisions of each CalChoice-supported community,

including rate setting, retail supply portfolio composition, disposition of financial reserves, and administration of complementary programs, are independently addressed by the respective governing councils of each community and administered by staff with supporting input from CalChoice's experienced team. The CalChoice model preserves the autonomy of each participating community by applying a "one size does not fit all" support framework, which allows participating communities to establish and pursue objectives and key parameters that are directly responsive to the unique constituents and interests within their respective communities.

In terms of CalChoice's role in supporting the renewable energy planning and procurement functions of each participating community, CalChoice coordinates directly with each community to identify required levels of renewable energy procurement (as specified under California's RPS Program) as well as any above-RPS procurement targets voluntarily adopted by each participating community (that may be related to specific retail service offerings that provide renewable energy deliveries in excess of statewide mandates). Once such targets are established, CalChoice supports discussions focused on future renewable energy planning trajectories, recommended planning reserve margins, necessary long-term contracting requirements, upcoming solicitation administration, and ongoing monitoring of supplier/developer performance to promote alignment between actual and projected renewable energy supply, including the completion of any portfolio balancing activities that may be necessary to close incremental open positions or dispose of unnecessary excess/length. Such discussions between CalChoice and participating communities remain ongoing with opportunities to adjust desired renewable energy parameters over time. The information provided by participating communities is compiled by CalChoice and aggregated, if/when appropriate, to facilitate administratively coordinated procurement efforts. Due to the relatively small size of CalChoice's participating communities,

meaningful administrative efficiencies have been achieved through joint solicitation administration. In particular, otherwise redundant costs and procedural elements, including solicitation administration, counterparty coordination, contract negotiations, and project development milestone tracking, are substantially minimized by coordinating/centralizing such functions/roles through CalChoice. These desirable outcomes are critically important to CalChoice's participating communities by reducing administrative complexities and staffing requirements that would otherwise need to be addressed by each participating community while simultaneously reducing costs that would otherwise burden the financial performance of each CCA program – such an approach allows participating communities to leverage the relatively limited specialized expertise and technical acumen that are needed to successfully administer CCA enterprises without having to independently identify and hire such staff, which could be time consuming and very costly.

Subject to pertinent renewable energy mandates imposed under California's RPS Program, participation in CalChoice's renewable energy procurement processes (meaning solicitations and related contracting efforts) is voluntary, and member communities may independently determine whether or not to participate based on the status of each community in progressing towards such statewide mandates and, if applicable, desired levels of renewable energy procurement in excess of such mandates. CalChoice does not act on behalf of its participating communities without prior direction/authorization, and any contracting processes resulting from CalChoice-administered solicitation efforts are subject to approval by the governing councils of participating communities (or predetermined, explicitly identified delegated authorities, which may allow senior city staff, such as a City Manager, to approve/execute certain contracts).

When contemplating resource planning and procurement efforts that will be undertaken by California retail sellers, including the preparation of requisite RPS Procurement Plans, RMEA encourages the Commission to consider the stark, undeniable differences between the relatively small communities supported by CalChoice and the state’s much larger Investor-Owned Utilities (“IOUs”). The disparate scope and magnitude of procurement responsibilities that must be undertaken by an IOU, relative to a small CCA, necessitate different approaches and organizational support. In the case of an IOU, there will be an entire procurement department available to support requisite efforts, including a team of attorneys, analysts, and other staff members – the level of procurement activities undertaken by an IOU seems to necessitate such an approach. In the case of a small CCA, however, there may only be a few renewable energy supply contracts needed to satisfy pertinent procurement mandates at any point in time – in consideration of the work required to support such efforts, a small CCA would not necessarily want or need to hire several staff members, invest in costly systems or perform elaborate analyses, as the scope of responsibilities that must be undertaken to support RPS compliance activities is relatively narrow in comparison to an IOU. RMEA encourages the Commission to consider these differences when reviewing/evaluating the respective RPS Procurement Plans submitted by California retail sellers – differing levels of detail, procedure, complexity, and coordination are likely very appropriate within the planning documents submitted by small, medium, and large organizations; and where the Commission may be inclined to identify informational deficiencies in certain areas (based on inevitable differences between content provided in the RPS Procurement Plans of California’s IOUs and smaller CCA programs), RMEA encourages the Commission to consider the inappropriateness of a “one size fits most/all” approach in managing widely varying RPS planning and procurement obligations.

While there may be some commonalities amongst planning and procurement practices reflected in the various RPS Procurement Plans submitted through this process, it seems reasonable to assume that noteworthy differences will be prevalent. This noted, the relatively close-knit community and ongoing coordination amongst CCA organizations (though associations like CalChoice and the California Community Choice Association, or “CalCCA”) has resulted in the sharing of many best practices, which may contribute to commonalities in various resource planning and procedural elements described in RPS procurement planning documents. The extent to which such commonalities exist may change over time, but the Commission should be aware of the potential for similarities amongst the plans of CCA organizations, which regularly coordinate during the development of regulatory filings/submittals. In the case of this RPS procurement planning process, broad coordination has been particularly prevalent.

With regard to RMEA, its participation in CalChoice’s shared service model will result in inevitable similarities when comparing the RPS Procurement Plans submitted by each participating community – due to the coordinated approach undertaken by CalChoice, key planning elements and procurement processes may, in fact, be identically described in each participant’s respective RPS Procurement Plan. RMEA respectfully requests that the Commission consider this inevitability while reviewing its RPS Procurement Plan – the similarities between planning documents submitted by CalChoice’s participating communities are reflective of thoughtful coordination, a commitment to fulfilling applicable compliance mandates reflected in California’s RPS Program, an interest in promoting administrative efficiency, and an effort to suppress planning and procurement costs that would be much higher if each participating community independently managed such efforts. To the extent that CalChoice remains successful in promoting inter-agency coordination and efficiencies,

participating customers are expected to benefit via retail rates that pass through the benefits of such efforts.

The Commission is also encouraged to consider the differing operational stages of reporting load serving entities (“LSEs”). Certain direction and guidance provided by the Commission seems to suggest that each element of the RPS planning process should be universally applicable across all LSEs, regardless of pertinent operational status, and that is not the case. For example, it is likely inappropriate and unhelpful for a newer CCA organization to prepare a ten-year negative price forecast or curtailment analysis when the nature of existing contractual commitments would render such information irrelevant and unhelpful – given the heightened attention and related information focused on changing market conditions, increased incidents of negative pricing and related energy curtailment, all LSEs are aware, to some extent, of these potential risk factors, but that does not mean a related forecasting effort or other form of analysis would provide useful information to each LSE. For example, a generalized ten-year negative price forecast or curtailment analysis would have little meaning for a new LSE without existing contractual commitments or if its contractual commitments did not expose the buyer to negative price risk (due to the application of settlement mechanisms or the specification of fixed delivery quantities). Similarly, it would not make sense for an LSE to prepare forward curtailment estimates if its renewable contract portfolio primarily included fixed volume supply commitments or did not allow discretionary curtailment via terms and conditions reflected in such contracts. Again, RMEA encourages the Commission to consider the appropriateness of universally requiring certain information within this planning process when such information may not be relevant or useful to the reporting entity (or other parties that may choose to review such information) – certain sections of these plans should be marked as “if necessary” or “if

applicable” without the assumption that all LSEs should be comprehensively responsive in addressing such topics; RMEA further encourages the Commission to consider this approach in future rulings/directives related to this RPS procurement planning process.

With regard to understanding the consequences of compliance shortfalls, the communities supported by CalChoice have been advised of both direct (*e.g.*, financial penalties and findings of non-compliance) and indirect (*e.g.*, reputational damage that might accrue to participating communities or CCA organizations, generally) impacts associated with such deficiencies and have chosen to pursue risk mitigation measures that are considerate of each participating community’s aversion to such risks as well as the related administrative complexity, cost and rigor that were deemed appropriate to achieve the desired level of mitigation. CalChoice members have also been advised of, and clearly understand, the financial penalty mechanisms in place under California’s RPS program – while it seems unlikely that a compliance shortfall will occur, there is an appreciation of prospective financial consequences, namely the \$50 per megawatt hour penalty applying to such shortfalls. This noted, RMEA observes that the RPS Program does not require a “compliance at any cost” approach, as the financial penalty structure is intended to address such issues in the unlikely event that they occur.

In considering its evolving informational needs, the City has engaged CalChoice to prepare a more robust risk assessment, as reflected in this RPS Procurement Plan. Details related to this risk assessment are further described below and focus on the City’s current portfolio of RPS supply agreements, evaluating potential portfolio impacts related to lower-than-expected deliveries and contract failure/termination amongst other considerations. In reviewing its analysis, the City feels confident that its MMoP, as further described herein, and general RPS procurement strategy will satisfactorily address applicable compliance mandates throughout the

planning period.

Again, the relatively small communities and related renewable energy procurement efforts supported by CalChoice are not comparable to the geographic footprint and/or procurement efforts undertaken by the incumbent utility, SCE; individual communities supported by CalChoice tend to have near-term annual renewable energy procurement targets ranging from 50-300 gigawatt hours, while SCE is expected to procure several thousand gigawatt hours to meet its respective obligations. The significance of these differences and the complexity of related procurement efforts, including the myriad contracts typically required by larger entities, necessitate a much different scope of procedural considerations and risk mitigation measures – the RPS Procurement Plans submitted by the IOUs should not be the standard by which all other Plans are measured.

### **I. Major Changes to RPS Plan**

This Section describes the most significant changes between RMEA’s Final 2021 RPS Procurement Plan and its Draft 2022 RPS Procurement Plan. A redline of this Draft 2022 RPS Plan against RMEA’s Final 2021 RPS Plan is included as Appendix A. The table below provides a list of key differences between the 2021 and 2022 RPS Procurement Plans:

<b>Plan Reference</b>	<b>Plan Section</b>	<b>Summary/Justification of Change</b>
2022 RPS Procurement Plan: Section II	Executive Summary	Updated to reflect the changes made throughout other sections of this RPS Plan.
2022 RPS Procurement Plan: Section IV	Portfolio Optimization	Updated to describe Voluntary Allocation Market Offer proposal/framework approved in Decision 21-05-030 and subsequent decisions and resolutions, and potential RPS planning implications. Updated to describe procurement undertaken to comply with D.21-06-035, the Mid-Term Procurement Decision.

2022 RPS Procurement Plan: Section IV.B.1	Long-term Procurement	Updated long-term RPS procurement discussion.
2022 RPS Procurement Plan: Section V	Project Development Status Update	Updated Appendix D to reflect the progress of new-build renewable generating projects.
2022 RPS Procurement Plan: Section VI	Potential Compliance Delays	Updated narrative to incorporate changing renewable energy procurement marketplace.
2022RPS Procurement Plan: Section VII	Risk Assessment	Added new risk assessment.
2022 RPS Procurement Plan: Section VIII	Renewable Net Short Calculation	Updated Appendix C to reflect ongoing procurement efforts.
2022 RPS Procurement Plan: Section XIV	Cost Quantification	Updated Appendix E to reflect ongoing procurement efforts.

## II. Executive Summary

RMEA is a CCA organization serving residential and business customers located within the City of Rancho Mirage. RMEA initiated customer service in May 2018 and currently serves approximately 15,000 retail electric accounts, which are expected to consume about 288 gigawatt hours per year. To streamline CCA program administration and create procedural efficiencies through jointly administered planning and procurement functions, RMEA continues to engage CalChoice for requisite planning and procurement support. RMEA regularly participates in jointly administered solicitations for long-term RPS-eligible renewable energy supply and other products, as administered by CalChoice. In fact, CalChoice, in combination with Desert Community Energy Authority and Clean Energy Alliance, recently administered a request for proposals for resources to meet the CCAs' needs under D.21-06-035, the decision

requiring procurement to address mid-term reliability for 2023-2026, and potentially long-term RPS needs. Responses were due February 4, 2022 and CalChoice is currently in the process of negotiating with shortlisted respondents. Irrespective of the outcomes related to these negotiating efforts, the City's most recent contractual commitments are expected to address the balance of RMEA's long-term RPS need in Compliance Period 4. In addition to various long-term supply agreements, RMEA has also executed certain short-term RPS supply commitments to address near-term RPS compliance mandates and related planning reserves. RMEA anticipates participating in various other solicitation efforts (administered by CalChoice and, possibly, the IOUs) as well as the Voluntary Allocation and Market Offer ("VAMO") process to address remaining RPS open positions (both short- and long-term, as appropriate) and the increasing renewable procurement targets reflected in California's RPS Program. The City's specific plans related to VAMO are currently being evaluated, and while the City is unprepared to provide guidance regarding such plans at this point in time, it will reflect the expected planning impacts of its decision in a future update to this Plan.

RMEA's RPS open positions remain subject to periodic evaluation – such evaluations will generally occur: 1) prior to solicitation administration (for purposes of quantifying renewable energy volumes to be addressed in the upcoming solicitation); 2) after bid receipt (to determine potential impacts to RMEA's RPS open position); 3) after execution of any RPS contract (to quantify expected reductions to the open position associated with successful procurement activities); and 4) throughout each operating year as the relationship between actual and expected renewable energy deliveries is periodically monitored relative to retail electricity sales (to determine if additional procurement or surplus sales may be necessary to promote portfolio balance). This process will remain ongoing and will be utilized to guide RMEA

participation in future renewable energy procurement processes. Based on the results of this recurring exercise, RMEA may: 1) evaluate the need to adjust renewable energy planning reserves; 2) consider the manner in which project development and performance risk will be assessed and incorporated during RMEA's renewable energy procurement efforts; and 3) assess various other considerations related to the RPS Program as further described in this RPS Procurement Plan.

Since submittal of its Final 2021 RPS Procurement Plan, which occurred on February 17, 2022, RMEA continues to successfully operate its CCA Program. Amongst its key operational concerns, RMEA, via services provided by CalChoice, engages in requisite planning and procurement efforts to ensure compliance with California's RPS procurement mandate. Similar to other CalChoice members, RMEA has access to various resources and advisory services as well as a community of member organizations, which are able to create efficiencies through the administration of joint procurement processes and other inter-agency coordination. Going forward, joint procurement efforts, including participation in various CalChoice renewable energy RFPs, will enhance RMEA's ability to efficiently and cost effectively identify and procure necessary renewable energy supply. RMEA also believes that this sort of joint procurement activity will provide access to larger, lower-priced procurement opportunities that would otherwise be unavailable to its individual CCA Program (due to sizing limitations), resulting in reduced overall renewable energy costs for its customers as well as general improvements in procedural efficiency.

City staff, in cooperation with CalChoice and its advisors, continue to evaluate the appropriateness of a 2% minimum margin of procurement (or "MMoP", which in the City's case is determined relative to total expected annual retail sales) for requisite renewable energy supply.

Analysis of the amounts of wind and solar curtailments in the CAISO over the 2018-2021 period show that curtailments were well below 1% of total load, and under 5% of the total renewable generation related to these specific technology types. Further, a risk analysis conducted by RMEA confirms that the 2% MMoP is expected to be sufficient. Ongoing discussions and analyses suggest that such a margin would provide adequate “cushion” in meeting applicable compliance mandates. In the future, if actual renewable energy deliveries are expected to fall short of projections, RMEA will consider adjusting the noted planning reserve. This approach seems to effectively balance RMEA’s interest in fulfilling pertinent RPS compliance obligations without subjecting the City’s CCA Program or its customers to unnecessarily high incremental renewable energy costs that would likely accrue in parallel with higher planning reserve targets. Before making any future adjustments (increases) to its anticipated renewable energy planning reserve, RMEA will also monitor the local and national economic situation, including any potential issues related to business closures, the recovery/collection of customer payments and other concerns that could arise as the federal government continues to manage inflationary pressures by increasing interest rates.

Over time, following the accumulation of additional financial reserves, the City will be better prepared to exhibit increased flexibility if larger renewable planning reserves are deemed necessary. With regard to the City’s noted 2% renewable reserve margin, which is synonymous with the term “margin of procurement”, the following methodology would apply: if expected retail sales total approximately 282 GWh in 2021, RMEA would plan to procure an additional 6 GWh of renewable energy (2% of the estimated 282 GWh retail sales forecast; this quantity of renewable energy would be in excess of the anticipated interim annual procurement target related to California’s RPS) to protect against renewable energy delivery shortfalls in this year. Relating

such a margin of over procurement to the 38.5% interim annual procurement mandate in 2022, this would provide the City with a 5.2% cushion (relative to the prevailing interim annual procurement target in this year) in the event that actual deliveries fell below expectations (relative to the expected 109 GWh of renewable energy that would be required to meet the State's interim annual procurement mandate). During RMEA's ongoing discussions with CalChoice on this topic, it has been determined that such a margin could be periodically evaluated and adjusted on an as-needed basis in consideration of the manner in which actual renewable energy purchases/deliveries track with related projections and applicable statewide mandates, renewable product availability, budgetary impacts, customer participation rates (in RMEA's CCA program) and various other considerations.

Looking ahead to the balance of 2022 and beyond, the City and CalChoice are committed to administering renewable energy solicitations on an as-needed basis to ensure that both short- and long-term renewable energy requirements are satisfied. In considering its long-term renewable energy procurement obligations, the City acknowledges that certain new-build contracting opportunities, which typically require long-term purchase commitments, may need substantial lead time before related renewable energy production occurs – ensuring that renewable energy deliveries associated with such projects dovetail with the City's mandated RPS purchase will require careful planning, selection of proven project developers and thoughtful consideration of ongoing renewable planning reserves to promote alignment of actual and projected renewable energy needs. For the time being, however, all of the City's RPS supply commitments are with generating facilities that have already achieved commercial operation. Given the success of its ongoing renewable energy procurement efforts, the City is confident in its ability to identify sufficient levels of renewable energy supply and will work diligently to

secure such supply during ongoing operations, including the consideration of short- and long-term RPS volumes available via VAMO. The City does not take for granted that proposed RPS procurement/project opportunities will result in finalized/executed contractual commitments. With this in mind, RMEA is prepared to exhibit flexibility in administering future RPS solicitations and will continue to engage the market until contractual commitments closely align with or exceed anticipated resource needs.

As part of its ongoing planning process, RMEA is also considering the manner in which renewable energy compliance risks will be assessed and managed. RMEA has further considered this topic after submitting its Final 2021 RPS Procurement Plan and determined that an enhanced risk analysis would be instructive in assessing the sufficiency of its MMoP and other variables that could impact planned renewable energy deliveries. The results of this analysis are presented below, including a description of the methodology that was applied in completing such analysis. Based on the results of its analysis and previous guidance from CalChoice, the identification and selection of highly experienced and financially viable renewable energy sellers remains the single most important consideration in promoting the achievement of RPS compliance – by pursuing supply commitments from such sellers, including the specification of contract terms that narrow compliance risk (through firm, fixed delivery quantities or relatively high energy delivery guarantees, RMEA and CalChoice believe that the substantial majority of future delivery risk can be avoided. This will be accomplished by completing a rigorous review of each prospective supplier’s development and operational experience, track record of success (in terms of developing and/or operating renewable energy projects), financial standing and credit rating, familiarity with pertinent development milestones as well as the state of completion for such items, customer references and various other

considerations. During completion of this process, the field of respondents will be significantly narrowed, leaving only the best qualified suppliers to undergo further consideration.

This Draft RPS Procurement Plan also addresses new requirements specified in the April 11, 2022 ACR, including updates that reflect an extended planning period, through 2032, as well as recently completed risk assessment; the Draft Plan was also updated to some preliminary information regarding the City's intent to participate in the VAMO process

### **III. Summary of Legislation Compliance**

This RPS Procurement Plan addresses the requirements of all relevant legislation and the Commission's regulatory framework. This Section describes the relevant statutory and regulatory requirements and how this RPS Procurement Plan demonstrates that RMEA meets these requirements.

SB 350 was signed by the Governor on October 7, 2015. SB 350 set a new RPS procurement target of 50 percent by December 31, 2030. On December 20, 2016, the Commission issued Decision ("D.") 16-12-040, which partially implemented the increased targets of SB 350 by establishing new compliance periods and procurement quantity requirements. On July 5, 2017, the Commission issued D.17-06-026, which implemented some of the key remaining elements of SB 350, including adopting new minimum procurement requirements for long-term contracts and owned resources, as well as revising the excess procurement rules.

SB 100 was signed by the Governor on September 10, 2018 and became effective on January 1, 2019. SB 100 increased the RPS procurement requirements to 44 percent by December 31, 2024, 52 percent by December 31, 2027, and 60 percent by December 31, 2030. On June 6, 2018, the Commission issued D.18-05-026, which implemented changes made

by SB 350 to the RPS waiver process and reaffirmed the existing RPS penalty scheme. In July of 2018, the Commission instituted Rulemaking 18-07-003 to continue the implementation of the RPS. On June 28, 2019, the Commission issued D.19-06-023, which continues to use a straight-line method to calculate compliance period procurement quantity requirements.

The current RPS procurement targets are incorporated into RMEA's Renewable Net Short Calculation Table as described in Section VIII below and attached as Appendix C. RMEA's current and planned procurement, as reflected in RMEA's Renewable Net Short Calculation Table and described in Sections IV and V, is expected to be sufficient to exceed these targets, including a minimum margin of over-procurement based on RMEA's perception of reasonably foreseeable risks, as further described in Sections VII and IX. RMEA is also positioned to meet the SB 350 long-term procurement requirement, as described in Sections V and VII.

SB 901, signed by Governor Brown on September 21, 2018, added Public Utilities Code section 8388, which requires any IOU, publicly owned electric utility, or CCA with a biomass contract meeting certain requirements to seek to amend the contract to extend the expiration date to be five years later than the expiration date that was operative as of 2018. RMEA does not have a contract with a biomass facility that is covered by Public Utilities Code section 8388.

As a public agency, the City takes official support positions on legislation through a formal vote of its governing council. Information on the City's official support positions, including a support letter, if applicable, will be made available as part of the agenda packet related to the Council Meeting at which such vote occurs. The City may also post a press release regarding official positions on major legislation to the City's website. Because the City only

takes support positions through the formal actions of its governing council, it cannot identify any future legislative efforts that it may support.

#### **IV. Assessment of RPS Portfolio Supplies and Demand**

##### **IV.A. Portfolio Supply and Demand**

As previously noted, RMEA began serving customers in May 2018. RMEA currently provides retail electric generation service to approximately 15,000 retail electric accounts, which are expected to consume about 288 gigawatt hours per year. To date, RMEA, via solicitations administered by CalChoice, has entered into several power supply agreements (both short- and long-term) with various suppliers, certain of which will contribute to RMEA's RPS compliance during early-stage and ongoing CCA operation. RMEA expects that further solicitations will be necessary over time, as additional supply commitments will be required to fulfill the City's growing renewable energy requirements that are expected to increase in concert with California's escalating RPS mandate. Such solicitation processes will be focused on both short-term and long-term renewable energy needs and will be administered on an as-needed basis, following RMEA's periodic evaluation of expected renewable energy deliveries relative to projections.

The exact portfolio characteristics selected may vary depending on direction received from the City's Governing Council, advice provided by CalChoice, renewable resource availability, procurement costs, legislative and policy changes, technological improvements, preferences of the community, or other developments, such as the procurement ordered in Mid-Term Reliability decision, D.21-06-035. To manage this future uncertainty, RMEA and CalChoice examine and estimate supply and customer demand and will structure future procurement efforts to balance customer demand with requisite resource commitments. This examination of customer demand and other market developments will help reduce costs and

assist in meeting expected renewable energy requirements for the period addressed in this RPS Procurement Plan.

RMEA is also attempting to gain an improved understanding of the prospective impacts to its customer base associated with the potential reopening of California's direct access market due to SB 237 (2018) and D.19-05-043. In D.21-06-033, the Commission recommended against expanding direct access at this point, however, the City recognizes that this may change in the future. The City will monitor direct access for any changes that may result in future adjustments to RMEA's load forecast and related renewable energy procurement obligations, which would be expected to decrease if RMEA loads migrates to direct access providers – in theory, such a change would push RMEA's renewable energy content higher unless surplus supply was sold to other market participants; this would be similar to the impacts experienced by California's IOUs, which have resulted from ongoing CCA implementations and expansions – following these activities, the proportionate RPS content of each IOU has increased, as evidenced in the annual Power Source Disclosure Report of each IOU (for reference, this has occurred in spite of IOU-administered solicitations intended to sell off surplus RPS supply, which suggests that other retail sellers, particularly CCAs, have already made meaningful progress in meeting applicable RPS mandates in the near-term planning horizon). To the extent that any adjustments are made to the City's retail sales forecast, it will reflect such adjustments in a subsequent RPS Procurement Plan. Through the ongoing evaluation of customer demand and other market developments, RMEA hopes to influence reduced overall costs while meeting planned procurement objectives for the period addressed in this RPS Procurement Plan.

Also, as COVID-19 cases generally decline and mobility restrictions continue to relax, the City will continue to monitor retail sales in the event that any meaningful deviations from

historical norms happen to surface. The City will also monitor any changes that might arise from ongoing inflationary pressures and the implementation of higher interest rates that are being applied by the federal government to manage such inflation. Much like load-related impacts throughout the pandemic, the City understands that customer energy use within California’s current period of economic uncertainty (meaning, the “high inflation, rising interest rate” environment being experienced throughout the country) and the post-pandemic recovery period may be difficult to predict and easily obscured by typical variations in weather. Nonetheless, the City will closely evaluate available data, attempting to parse various impacts on retail electricity consumption while incorporating adjustments to its planning assumptions on an as-needed basis. Regardless of any near-term load volatility, the City remains confident that its internally adopted MMoP, when applied to its renewable energy targets, will virtually eliminate the potential for compliance deficits.

#### **IV.A.1. Voluntary Allocation and Market Offer (VAMO)**

The Final Report of Working Group 3 Co-Chairs: Southern California Edison Company (U-338E) California Community Choice Association, and Commercial Energy (“Final Report”) was filed on February 21, 2020, in the Commission’s PCIA rulemaking (R.17-06-026). One of the Final Report’s key proposals was for the Commission to create a VAMO framework, where each LSE serving customers subject to the PCIA would be provided an annual option to receive an allocation (“Voluntary Allocation”) from the IOUs’ PCIA-eligible RPS energy portfolios, based on that LSE’s forecasted, vintaged, load share, and subject to certain conditions. Further, the Final Report proposed that any declined shares would be offered to LSEs through a market process (“Market Offer”). On May 20, 2021, the Commission adopted D.21-05-030, addressing the proposals in the Final Report. D.21-05-030 adopted the Final Report’s VAMO proposal, subject to certain limitations and additional requirements. LSEs will also be able to acquire

resources through the VAMO structure that will be considered long-term contract resources.

The Commission recently approved D.22-06-024, which provided additional guidance on the VAMO process, as well as Resolution No. E-5216, which approved the IOUs' pro forma contracts for the voluntary allocations. The IOUs have also filed advice letters outlining their market offer processes for resources not allocated through the voluntary allocations; approval for these processes is expected later this year.

The process for voluntary allocations is currently ongoing and is expected to be concluded in July 2022. RMEA is currently evaluating its needs, as well as available VAMO allocations for both long-term and short-term RPS energy and expects to finalize its choices in July 2022. At this time, the City is only prepared to indicate that it expects to accept certain quantities available via VAMO, but the extent to which available allocations will be accepted remains uncertain. As such, RMEA plans to file an update in August 2022, informing the Commission on the results of its participation in the VAMO process.

#### **IV.A.2. Portfolio Optimization**

The City's goal is to meet its locally adopted policies and statewide mandates in a manner that is both cost effective and supportive of a well-balanced resource portfolio. Portfolio optimization strategies can help reduce costs and should facilitate alignment of the City's resource portfolio with forecasted energy requirements of its CCA customers. In order to support this goal, the City regularly considers the following strategies:

**Joint Solicitations:** Joint solicitations can expand the procurement opportunities available to a CCA, as well as potentially provide better contract terms. The City participated in the recent CalChoice, Desert Community Energy Authority and Clean Energy Alliance solicitation for Mid-Term Reliability (MTR) resources and long-term renewable energy supply and intends to continue participating in such joint solicitation activities as part of the shared services arrangement that it has in place with CalChoice. The City is also evaluating and participating in joint solicitations through CalChoice with other CCAs.

**Purchases from Retail Sellers:** Purchases of RPS-eligible renewable energy (via resale) from other retail sellers can provide a cost-effective way of meeting short term resource needs or filling in gaps in procurement while long term projects are under development. The City will evaluate solicitations offered by other retail sellers, as necessary.

**Sales Solicitations:** Based on its portfolio rebalancing needs, the City will also consider administering RPS sales solicitations (with the City serving as seller) to other market participants.

**Optimizing Existing Procurement:** As the City considers its long-term resource needs, it may evaluate options in its future power purchase agreements, if available, to increase output of existing generating facilities through technological upgrades or by adding new capacity to an existing generator. Expanding existing facilities or adding energy storage infrastructure at existing generating facilities may provide additional generation at reduced costs and/or increased operational flexibility with a lower risks of project failure (because the need for distribution system upgrades and permitting may be reduced) – such opportunities may be pursued, as deemed appropriate by the City.

On June, 24 2021, the Commission adopted D.21-06-035, which directed all retail sellers to procure 11,500 MW of new net qualifying capacity (“NQC”) between 2023 and 2026 and assigned each retail seller a specific procurement responsibility based on its share of peak demand. The City’s total obligation is 18 MW, which must include minimum amounts of procurement from certain subcategories: (1) 4 MW from firm, zero-emitting capacity by 2025; (2) 1.5 MW from long duration storage resources by 2026; and (3) 1.5 MW from firm, non-fossil fueled baseload generating resources by 2026. The City is currently evaluating a range of procurement options for meeting is D.21-06-035 obligations. This procurement was addressed through the request for proposals conducted jointly by CalChoice, Desert Community Energy Authority, and Clean Energy Alliance described elsewhere in this RPS Procurement Plan. Options to be considered range from RA-only contracts to renewable generation, including that paired with storage and stand-alone storage contracts with various different energy structures. While RPS-eligible generation would provide an added benefit, it is not the primary objective or deciding factor in determining which procurement options will ultimately be selected. If the City

does meet any of its D.21-06-035 procurement obligations with renewable generation, then that generation may be in addition to the planning and forecasting described in this RPS Procurement Plan. The City will try to optimize its RPS procurement with the requirements from D.21-06-035 and will hopefully be able to harmonize these procurements to reduce costs, improve resource dispatchability (to better align renewable resource delivery profiles to the City's load profile) and avoid any need to over-procure resources.

#### **IV.B. Responsiveness to Local and Regional Policies**

##### **(i) Responsiveness to Policies of RMEA's Governing Council**

RMEA is a local governmental agency that is subject to the control of the City's Governing Council and is directly accountable to the community that it serves. RMEA generally supports and is committed to meeting the state's GHG reduction and renewable procurement goals. Furthermore, and as noted elsewhere in this RPS Procurement Plan, the City has adopted near-term renewable portfolio targets that closely align with RPS mandates. As a result, the City's supply portfolio will be structured to achieve and sustain RPS compliance at the lowest possible cost (which is a key objective of the City's CCA program).

##### **(ii) Responsiveness to Regional Policies**

As noted in the previous sub-section, the City is overseen by its governing council, which also serves as the governing board/authority for its CCA program. As such, the policies adopted by the City's governing council (related to CCA operations) serve as guiding directives for CCA operations, including the determination of renewable energy planning targets that are intended to support local policy preferences.

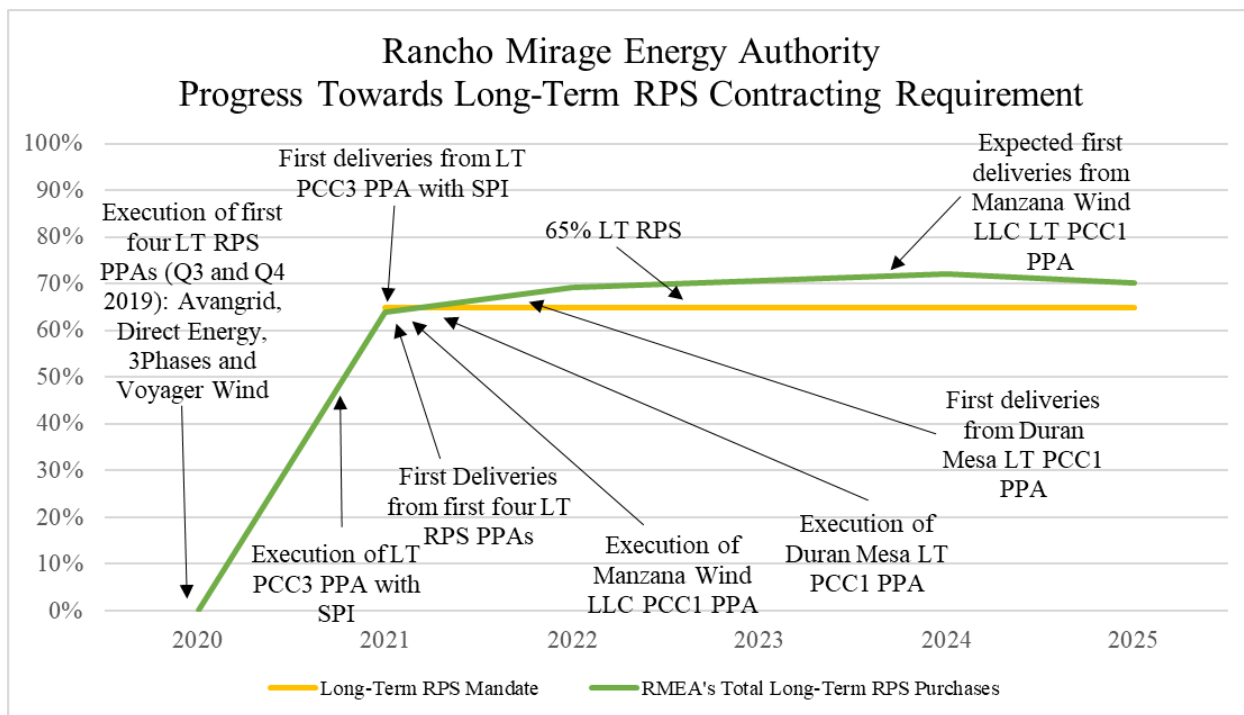
#### **IV.B.1. Long-term Procurement**

Pursuant to Public Utilities Code section 399.13(b), from 2021 onwards, 65 percent of mandated renewable energy purchases must be sourced from contracts of 10 years or more. The City has been conscientiously planning and procuring to meet this requirement and is making good progress in this regard. Based on existing long-term supply commitments, the City expects to achieve compliance with the long-term contracting requirement in the current compliance period, Compliance Period 4 (2021-2024). Additional long-term contracting efforts will be pursued to support RMEA's ongoing RPS compliance in Compliance Period 5 and 6.

Regarding recent additions to the City's long-term RPS supply portfolio, RMEA executed an additional long-term PCC1 supply agreement with a New Mexico-based wind resource on April 21, 2021 – initial project deliveries commenced in December 2021 and will provide RMEA with approximately 8,000 MWh/year of incremental PCC1 volume during the fifteen-year contract term. RMEA is also in late-stage negotiations with an experienced supplier of long-term PCC1 products and expects to finalize such negotiations (and execute a related supply agreement) around the time that this RPS Procurement Plan is submitted – RMEA looks forward to updating the Commission regarding the successful execution of this agreement and its impact on the organization's resource planning efforts in a future RPS Procurement Plan.

The following chart reflects the City's current and anticipated progress in meeting California's long-term RPS contracting mandate in Compliance Period 4 and beyond. Note that this chart does not include the City's anticipated VAMO elections, which could meaningfully increase its long-term RPS positions beyond those reflected below. The City notes that existing long-term contracts, including the recently executed addition to its long-term RPS supply portfolio, are expected to fulfill its long-term contracting requirements in CP4, plus a reasonable

reserve. Should any delivery delays occur, the City will pursue other long-term contracting opportunities and will advise the Commission of such procurement activities.



As previously noted, RMEA has made considerable progress in addressing outstanding long-term RPS open positions. The City expects to regularly engage in jointly administered long-term renewable solicitations via its association with CalChoice and anticipates the execution of additional RPS supply agreements over time. In particular, RMEA is participating in a joint CalChoice, Desert Community Energy Authority and Clean Energy Alliance Mid-Term Reliability Request for Proposals, which was released in January 2022. Responses were returned on February 4, 2022, and RMEA, along with CalChoice, is currently negotiating with shortlisted respondents. Projects are expected to be online to meet the various deadlines in D.21-06-035 between 2023 and 2025. Based on RMEA's ongoing success in fulfilling projected long-term open positions in Compliance Period 4, its current long-term RPS needs are very small. To address such needs, it may accept long-term allocations available through VAMO and/or engage

in other procurement processes to address future open positions for long-term RPS supply. RMEA understands that fulfilling upcoming long-term contracting requirements (in 2025 and beyond) may be somewhat iterative and dependent upon the acceptance of available VAMO allocations as well as any offers that may be received through future solicitation processes (and related contracting successes). In the event that the City enters into another contract with a new-build renewable generating facility, it will closely monitor project development progress and contract/project performance to ensure that actual long-term deliveries meet or exceed pertinent requirements. Any future long-term contracting efforts, including the acceptance of any long-term VAMO allocations, will be described in subsequent RPS Procurement Plans.

#### **IV.C. Portfolio Diversity and Reliability**

RMEA has considered and will continue to consider the deliverability characteristics of its current and future generating resources placed under contract (such as the resource's dispatchability, available capacity, and typical production patterns) and will review the respective risks associated with short- and long-term purchases as part of its forecasting and procurement processes. These efforts will lead to a more diverse resource mix, address grid integration issues, and provide value to the local community. The City may also consider renewable energy plus storage options and stand-alone storage options, subject to availability and cost, which would allow RMEA to better align/dispatch available energy supply in consideration of customer usage patterns – such resource types may be eventually included in RMEA's supply portfolio as a result of its participation in the joint solicitation with CalChoice, Desert Community Energy Authority, and Clean Energy Alliance as described elsewhere in the RPS Plan. Solicitations of this sort, both current and future, should help alleviate grid impacts that could otherwise result from increased buildout of certain resources that may contribute to conditions of

over-generation. A quantitative description of this forecast is attached to this RPS Procurement Plan in Appendix C.

While the City is not opposed to considering emerging renewable generating technologies, it is unlikely that upcoming supply agreement(s) will focus on such resources – the City has yet to receive credible and cost-competitive proposals from emerging renewable generating technologies, but if such proposals arrive in the future, they will be closely considered alongside other viable options. Based on the City’s renewable energy planning goals and intended reserve margins, its renewable supply commitments must result in reliable, cost-effective supply to promote compliance with applicable RPS mandates without bearing the risks typically associated with newer technologies. Until compelling proposals for emerging renewable generating technologies are received, the City will likely exhibit preferences for “tried and true” generating technologies, including energy storage options, that will minimize delivery risk during ongoing operation while allowing for re-shaping of certain renewable generating profiles to better align supply with demand.

The City will procure renewable and other energy products, as necessary, to ensure that the future energy needs of its customers are met in a manner that promotes reliability and cost-effectiveness, consistent with applicable compliance mandates and general objectives of the CCA Program. The City has established procurement targets for renewable energy supply, including subcategories for various renewable energy products, and has also established targets for related planning reserves as described elsewhere in this document – currently applicable renewable energy procurement targets generally mirror RPS mandates, plus the noted two percent planning reserve. To the extent that the City’s energy needs are not fulfilled through the use of renewable generating resources, it should be assumed that such supply will be sourced

from conventional energy resources, such as natural gas generating technologies or system power purchases, or other carbon-free generating technologies (specifically, hydroelectricity) that may be necessary to further progress in meeting California's greenhouse gas emission reduction goals.

RMEA currently utilizes a portfolio risk management approach as part of the power purchasing program that is administered by CalChoice on its behalf, seeking low-cost supply (based on prevailing market conditions at the time of solicitation administration) as well as diversity amongst technologies, production profiles, project sizes and locations, counterparties, lengths of contract, and timing of market purchases. It is reasonable to assume that RMEA's supply portfolio will increase in complexity over time, utilizing an increasing number of supply contracts and related supplier relationships by emphasizing the principles of resource and counterparty diversity.

A key component of RMEA's planning process relates to the analysis and consideration of expected load obligations with the objective of closely balancing supply/demand, cost/rate stability and overall budgetary impacts. RMEA and CalChoice actively monitor actual customer usage, relative to projections, refining such forecasts as well as the ability to minimize variances between procured energy quantities and actual usage – while this process may not eliminate such variances, it should significantly reduce them, minimizing exposure of the CCA Program and its customers to unexpected cost spikes that may occur within California's power market. The City is committed to developing an accurate understanding of the manner in which its customers use electric power to promote an efficient and cost-effective procurement process.

As part of developing an understanding of how its customers use electric power, the City maintains load curves that reflect expected increases in load due to both transportation

electrification and building electrification. Transportation electrification planning considers personal light duty vehicles, electrification of fleets and local targets for electrification of public transit systems. Contracting with a diverse set of renewable resources from different locations throughout California and the West will be necessary to accomplish the goal of aligning a renewable energy portfolio to LSE's load curves.

With regard to the City's anticipated renewable energy requirements, RMEA maintains portfolio coverage targets of up to 100 percent in the near-term (0 to 2 years) but leaves larger open positions in the mid- to long-term, consistent with generally accepted industry practices. This noted, RMEA is aware of the eminent long-term contracting requirement of 65% and keeps this obligation in mind when addressing its longer-term portfolio coverage targets.

At this point in time, the City has no explicit preference for specific renewable generating technologies and considers all resource types with the goal of assembling a diversified, cost effective renewable energy supply portfolio that will deliver energy in a profile that is generally consistent with the anticipated load shape of RMEA customers. RMEA is also aware that future reliance on intermittent renewable generating technologies has the potential to create occasional misalignments between customer energy consumption and power production as well as variances between the actual and expected quantity of renewable energy received from such projects. In order to better align the quantities of renewable energy with load, and help reduce variances between actual and expected quantities of renewable energy, the City is considering both stand-alone storage and hybrid or co-located storage and renewable energy projects. The City has also applied the previously described minimum margin of over procurement for renewable energy (set at 2% of retail sales). To the extent that significant, prolonged variances are observed between RMEA's actual and expected energy use, staff may propose increased planning reserves

(beyond the current 2% of retail sales metric reflected herein).

#### **IV.D. Lessons Learned**

In communicating with and reviewing the RPS Procurement Plans of California's most mature CCA organizations as well as considering its own experiences in developing an RPS portfolio, the City observes that geographic diversity remains an important element in selecting renewable energy resources/contracting opportunities. The City observes that certain areas of the state have been overbuilt with renewable generating infrastructure, which has created challenges related to depressed market prices and increasing levels of resource curtailment. The City has kept this observation in mind when assembling its own renewable resource portfolio, avoiding overcommitment to resources within a narrowly defined geographic area. Based on communications with CalChoice and other CCAs, the City also continues to evaluate historical pricing trends, which have materially changed in the wake of increased renewable energy buildout. Due to these transitions and suppressed (and oftentimes negative) market pricing, the City will likely avoid contracting with generators located in certain areas or require substantial storage capacity (operated in parallel with renewable generating infrastructure) to mitigate market price risk when considering renewable generating resources located in such areas. The City appreciates the substantial financial risks that are created by California's long-term renewable contracting requirements and will continue to explore opportunities to manage such risks during its contracting efforts.

#### **V. Project Development Status Update**

As described in Section IV.B above, RMEA's current and planned procurement is expected to be sufficient to meet applicable RPS procurement requirements while supporting the state's GHG reduction targets. Further, RMEA's current and planned procurement supports

system reliability by considering both portfolio diversity and alignment with RMEA customers' load curve. Specifically, RMEA's selected projects fit within and support RMEA's plans for meeting these goals.

RMEA's ongoing contracting efforts have resulted in supply commitments with new/repowered generating assets and related (updated) details are included in the Project Development Status Update Report, Appendix D.

RMEA is pleased to be able to inform the Commission that its projects under development have achieved commercial operation. As reported in its Final 2021 RPS Procurement Plan, the Duran Mesa wind project located in Duran, NM commenced commercial operations in late 2021. The two other projects, RMEA had under development are both operational; RMEA reported in its Final 2021 RPS Procurement Plan that ColGreen was operational and IP Athos achieved its commercial operations date on May 19, 2022.

Regarding RMEA's commitment to new-build renewable infrastructure, it has entered into three RPS supply agreements supporting new renewable infrastructure. As other favorable procurement opportunities are identified for new renewable generation, RMEA will thoroughly evaluate such opportunities against other available supply alternatives.

## **VI. Potential Compliance Delays**

RMEA does not anticipate any compliance delays for the current compliance period (Compliance Period 4, which includes calendar years 2021-2024). Ongoing contracting processes have resulted in the identification and execution of numerous renewable energy supply commitments, and RMEA's attention to annual balancing of requisite renewable energy purchases relative to retail sales is expected to put the CCA program in position where actual renewable energy deliveries closely align with (but slightly exceed) applicable compliance

mandates during the current compliance period. RMEA is also making good progress in meeting the state's 65% long-term contracting requirement. RMEA will continue assessing projected long-term open positions relative to expected deliveries and intends to participate in future CalChoice-administered solicitations, as necessary, to ensure compliance with this element of the RPS Program. The City is also considering the extent to which it may accept long-term allocations available under the VAMO process, which would augment existing long-term RPS positions.

As a small CCA, the City recognizes that its portfolio of resources will be more limited than larger LSEs and that delays in online dates and reduced generation from the RPS contracts may have significant impacts on both its level of RPS and its progress to achieving 65% from long term contracts. The City has discussed this topic with CalChoice, which continues to manage such risk through the screening and evaluative processes associated with its renewable energy solicitations. In particular, a key element of proposal evaluation focuses on the identification and selection of highly experienced and financially viable renewable energy sellers – by pursuing supply commitments from such sellers, the City and CalChoice believe that the substantial majority of future delivery risk is avoided. This will be accomplished by completing a rigorous review of each prospective supplier's development and operational experience, track record of success (in terms of developing and/or operating renewable energy projects), financial standing and credit rating, familiarity with pertinent development milestones as well as the state of completion for such items, customer references and various other considerations. During the completion of this process, the field of respondents will be significantly narrowed, leaving only the best qualified suppliers to undergo further consideration. The results of this process have led CalChoice, in cooperation with the City, to determine that further quantitative risk assessments

have not been necessary thus far. In the future however, based on evolving market conditions, supplier interest or other circumstances, the City and CalChoice could determine that completion of quantitative risk assessments may be necessary and appropriate, depending upon the renewable energy procurement opportunities that happen to be pursued.

If a future compliance issue is identified or RMEA encounters challenges in securing requisite renewable energy supply, then RMEA will address such issue(s) in a subsequent RPS Procurement Plan.

As the Commission is aware, successful renewable energy markets depend upon international supply chains, substantial labor commitments, robust financial markets, timely interactions with governmental planning authorities and various other considerations. With numerous disruptions caused by the COVID-19 pandemic and various other challenges, it is incredibly challenging to determine if, and to what extent, renewable energy procurement opportunities may be compromised, particularly new-build renewable energy projects which typically rely on long-term contracts as the basis for project financing. The City will closely monitor energy usage patterns to determine if any planning adjustments may be necessary based on the current and expected economic conditions.

The City intends to closely monitor this situation as well as potential fallout related to supplier/developer effectiveness in fulfilling mandated renewable energy needs, project completion and overall supplier viability – the City is aware that many supply chains have been disrupted during the pandemic with a variety of material/component shortages occurring throughout the industry; recent concerns regarding the application of tariffs on certain imported renewable infrastructure have also provoked certain supplier to request “reopening” of previously executed contracts and/or the negotiation of terms that allow for price adjustments in

the event of unexpected costs (such as the noted tariff). While the tariff issue seems to be temporarily resolved, concerns of this nature have introduced a measure of instability in the long-term contracting efforts of many retail sellers. With these concerns in mind, the City encourages the Commission to closely monitor and potentially reconsider certain elements of the RPS Program as this situation evolves, particularly if there are widespread, well-documented challenges as California retail sellers attempt to fulfill pertinent procurement requirements. Related, the City is aware of numerous instances in which contract documents are being drafted with more expansive force majeure language to alleviate the concerns of sellers/developers in meeting project completion schedules due to potential pandemic-related delays – “day for day” commercial operation date extensions have been pursued, creating flexibility in achieving commercial operation date targets based on the duration of shelter-in-place directives. From the City’s perspective, which is informed by guidance provided via CalChoice, buyers must be diligent in contracting efforts to strike an appropriate balance between flexibility and certainty – not all project development delays are expected to be directly attributable to the pandemic, so effectively parsing contractual accommodations (for development delays) in consideration of this reality should serve to manage uncertainties related to project completion and renewable delivery timelines.

The City also encourages the Commission to coordinate closely with the Legislature to evaluate potential adaptations to the RPS Program, which may become necessary if renewable energy markets are materially impacted by the pandemic. With rapidly changing circumstances and related information, the City anticipates the need for considerable flexibility/agility in working to meet requisite renewable energy procurement mandates. In the meantime, the City will remain hopeful that impacts to renewable energy markets will not compromise California’s

ability to reach its renewable energy procurement goals or its own, internally established renewable procurement targets.

## **VII. Risk Assessment**

The City will make reasonable efforts to minimize the risk of renewable procurement shortfalls for purposes of complying with applicable RPS mandates established in SB 100, but it cannot definitively predict the scope or magnitude of circumstances that may impact annual retail energy sales, renewable energy markets or individual project performance. With this in mind, the City will responsibly assess RPS compliance risk by considering three key planning elements: 1) retail sales variability; 2) renewable energy production/delivery variability; and 3) impacts to overall system reliability associated with the City's planned RPS purchases and other influences. These topics will be generally considered in the noted sequence with observed risks informing potential adaptations to the City's planning process, potential adaptations to planning reserves and, ultimately, refinements to the City's renewable energy procurement (or sales) processes and quantities. As described elsewhere in this RPS Procurement Plan and in consideration of City-adopted RPS planning targets, the City expects to be well-positioned to meet its RPS compliance requirements in Compliance Period 4 (and beyond). Therefore, the City's self-determined risk of non-compliance is low. Nevertheless, the City will continue to assess demand-side and supply-side risks to better understand potential areas of concern and to promote achievement of organizational compliance objectives. If the City's self-determined risk of non-compliance happens to change in the future, it will accordingly advise the Commission of such assessment, related causes and anticipated remedial actions.

Regarding demand-side risk, the City continues to evaluate prospective retail sales during the 10-year planning period, including but not limited to new development projects (that could

increase retail energy consumption) and business closures, expected customer attrition (or growth) and changes to behind-the-meter generating capacity. From a practical perspective, the greatest demand-side risk with regard to the City's anticipated customer base is that retail sales are meaningfully higher than anticipated during Compliance Period 4. As the Commission is aware, CCAs provide an opportunity for customer choice, allowing customers to voluntarily participate in the City's program or remain bundled customers of the incumbent utility, SCE. To the extent that customers choose to leave the City's CCA program, or "opt out", the City's retail sales will decrease, resulting in related increases to the ratio of renewable energy serving such customers (and improving the City's position relative to applicable RPS compliance mandates) – it is unlikely that the City's renewable supply commitments will provide volumetric flexibility/options in the event of higher-than-anticipated retail sales volumes; in such instances, the City would need to pursue additional procurement opportunities to address unanticipated open positions. The CCA program has been operating since 2018, and its customer base appears to be relatively stable; barring any unforeseen circumstances, substantial year-over-year variations in retail sales are not expected to occur. Also, considering the City's ongoing coordination with its planning department, the City expects to be well informed regarding upcoming development projects or other customer changes that could materially increase retail sales. For this reason, the City believes that demand-side RPS compliance risk is manageable.

Regarding supply-side risks, the City is aware of the generation variability/intermittency associated with certain renewable technologies as well as the possibility of curtailment (based on pricing considerations or market directives) during certain times of day/year – with regard to curtailment, the City has learned from the experiences of LCE, a fellow CalChoice member, but the supply-related impacts associated with such curtailment activities at the Western Antelope

Dry Ranch photovoltaic generating facility (in Lancaster, California; this facility is under long-term contract with LCE) have been very low over the past three years; additional detail related to LCE's experience with curtailment is provided below. In the case of new-build renewable projects, the City is also aware of the possibility of project delays and, potentially, project failure. Such circumstances can materially diminish renewable energy deliveries, jeopardizing the achievement of RPS compliance and exposing the CCA program to unexpected financial consequences, if such circumstances impact larger (or multiple) supply sources. Based on the City's relatively modest RPS planning reserve, it will need to be highly selective in identifying its renewable energy suppliers, particularly those offering supply from new-build generating facilities, and will generally focus on organizations that have well-documented track records of successfully fulfilling RPS delivery obligations.

To the best of the City's knowledge, few early-stage CCAs have experienced difficulties with generalized renewable energy procurement, but long-term RPS contracting has been more challenging – typical lead times (between contract execution and project completion) associated with new-build renewable energy projects are often 2-3 years or longer, and related power supply contracting efforts are rarely initiated so far in advance of service commencement. With this observation in mind, early-stage CCAs must either: 1) focus RPS contracting efforts on existing renewable generating resources; or 2) accept failure/delay risks associated with new-build renewable projects placed under contract near the time of CCA launch by incorporating reasonable planning reserves to mitigate such risks. In the case of the City, a balanced approach has been pursued, which will focus on contracting efforts with both new and existing renewable generating resources, thereby minimizing, but not eliminating, risks associated with compliance shortfalls while promoting new renewable infrastructure buildout that will be required to meet

California's increasing renewable procurement mandates. The City expects to pursue long-term RPS contracts that will yield delivery surpluses relative to applicable compliance mandates and such surpluses are expected to mitigate concerns related to project development delays and or failures during Compliance Period 4.

The City also anticipates mitigating supply-side risk by incorporating fixed-volume and index-plus pricing structures amongst its portfolio of RPS supply agreements. These procurement mechanisms serve to mitigate the risk of delivery variability (typically associated with intermittent renewable resources and/or renewable resources that may be subject to periodic curtailment) and exposure to negative market pricing (which could prompt economic curtailment). Fixed volume arrangements, in particular, also mitigate risk associated with commercial operation delays and facility failure; these structures also provide buyers with financial protections (via penalty payments) for under-delivery (which could be used, as a last resort, to offset compliance penalties in the event that the supplier or the City are unable to identify replacement volumes).

As part of the City's approach to managing supply-side risk (which will be carried out through its relationship with CalChoice), it has also adopted what it believes to be a CCA best practice related to RPS contracting: structuring solicitations to identify proven renewable generating technologies in RMEA resource locations to be developed and/or operated by the most experienced available suppliers (with strong, well-documented track records of successful project completion and operational reliability). Unlike certain of the IOU's early-stage contracting efforts, which focused on experimental/unproven renewable generating technologies, CCAs have generally focused early-stage contracting efforts on tried-and-true technologies and highly experienced counterparties – the City intends to follow this practice as well.

This noted, there is always a possibility that future renewable energy supply will not be delivered as required, which is why the City, based on discussions with CalChoice, has incorporated a 2% minimum margin of procurement in its renewable energy planning process. The 2% minimum margin of procurement, or “planning reserve”, has been determined to be sufficient, as discussed below, but this metric will undergo periodic review and, if necessary, revision during future planning discussions and in consideration of ongoing procurement efforts.

The City has compiled information about curtailments of renewable energy in CAISO over the last four years. This information is presented below. The data shows that renewable curtailment has been consistently under 1% of load. The City also analyzed the occurrence of negative prices within the SP-15 area of the CAISO. These studies, combined with the analysis of other risk discussed below, indicate that the 2% minimum margin of procurement adopted by the City should be sufficient, allowing for additional variability in supply. These past results are obviously not indicative of what might occur in the future, and indeed the data shows that the trend of renewable curtailment has generally been increasing. However, the City has considered recent and expected developments in energy markets and believes that increases in curtailments and negative prices should not continue growing as seen in the last few years. There are several reasons for this. First, the amount of storage available on the CAISO system, much of it tied directly to renewable resources, has grown dramatically over the last year and is expected to continue this explosive growth over the next few years. The growth of storage should provide a sink for large amounts of renewable energy that might today be curtailed, especially since much of the storage is co-located with the renewable energy. Exports of energy from the CAISO during periods of low prices when renewable curtailment would likely occur have also been increasing as the rest of the west begins to recognize the benefits to using this cheap energy from

California when it is available. In addition to storage and exports, expected increases in transportation and building electrification will likely increase demand and also provide a sink for the rapidly increasing amounts of renewable energy. The changes brought about by climate change may also reduce the curtailment of renewable resources. This can be seen in the reduction in curtailments that occurred in 2021 which was at least partially due to the reduction in hydro generation due to the ongoing drought. As temperatures in California increase it is expected that annual snowpacks will decrease reducing the amounts of hydro generation. Additional, climate change is expected to increase the volatility of weather, likely leading to more years with low hydro generation in the future.

The City has recently attempted to quantify the energy impacts of such supply side losses into three main categories: 1) curtailment risk; 2) counterparty risk; and 3) project cancellation risk. These risks, as previously discussed, pose the greatest impacts to the delivery of RPS energy. In addition to the historical curtailment analyses already discussed (and further elaborated on below), the City has examined forwarding looking data concerning curtailment risk as the likelihood the market forward curves are below  $-\$15/\text{MWh}$  on an annual basis from the year 2022 to the end of the contract's life. Below this dollar amount, the City is likely better off financially curtailing the unit and purchasing additional renewable energy credits on the secondary market. The figures presented in the column quantifying curtailment risk are calculated by taking the energy delivered to market and multiplying it by the likelihood of curtailment. Counterparty risk is the risk posed by a counterparty being unable or unwilling to honor their total RPS delivery obligations, as reflected in related contract documents. The City quantifies this likelihood by considering S&P Global's, Global Corporate Annual Default Rates by Rating Category (%) as a measure of organizational viability and financial stability. While

this rate considers industries beyond the energy sector, it provides solid insights into the correlation and potential impacts of dealing with uncreditworthy counterparties. The likelihood of default by credit rating was averaged over the years from 2014 to 2019. These years were chosen to remove irregularities in default rates during the COVID-19 pandemic. If a counterparty was found to be unrated, then the contract was reviewed to identify specified credit assurances; based on such assurances, an approximate rating was derived based on experience and risk tolerance. The final category reflected in the City's analysis is project/contract cancellation risk. This category is distinct from the counterparty risk category because the risk of project/contract cancellation may only affect a single project under a counterparty's portfolio. Projects may be cancelled for a variety of reasons, but in today's market economy, deals struck several months to a year ago may no longer be economic for the seller. It was assumed this risk only effects single source projects, which have yet to be constructed. These projects were chosen because they have a single point of failure unlike RPS energy purchased from a pool of resources (under a portfolio-style purchase agreement in which there is generally more diversity amongst the sources of supply). Based on discussions with various counterparties and its industry knowledge, the City will assume this risk effects 1 in 20 deals. Considering these categories holistically, the City is able to derive a cumulative energy percentage at risk. To add to the City's conservative tolerance for risk, a top-level risk of non-delivery offset at 0.25% of renewable energy procurements will be added to the calculated energy at risk percentage. This adder will help to express risks the City cannot foresee and help to better guarantee full compliance through the assumption of lower than expected RPS deliveries (which will necessitate higher levels of RPS procurement, via renewable energy planning reserves). The percentage of renewable energy and error is the percentage of total renewable energy procured, while the percentage of retail load

is the energy at risk as a percentage of retail load. These “at risk” percentages reflect possible losses which, through no fault of the City, may occur by virtue of being a market participant. These losses pose a risk for non-compliance relative to the City’s RPS goals and targets. Since this number is not a guaranteed loss, the City will implement the previously mentioned mitigation strategies to give the greatest chance of full market delivery and compliance.

ID	Contract	RPS Contract ID	Energy	Delivery & Market Risks		
			Energy to be Delivered to Market (MWh)	Curtailment Risk (MWh)	Counterparty Risk (MWh)	Project Cancellation Risk (MWh)
1	Contract 1373	0	108,000	-	2,076	-
2	Contract 1379	0	283,500	-	5,449	-
3	Contract 1380	0	167,737	396	3,224	-
4	Contract 1691	0	445,375	1,053	8,560	-
5	Contract 1804	0	5,000	-	-	-
6	Contract 2102	0	52,920	-	1,017	-
7	Contract 2532	0	12,000	-	231	-
8	Contract 2687	0	310,260	-	5,963	-
9	Contract 2802	RMEA70019	464,100	-	8,920	-
10	Contract 2971	RMEA90020	13,000	-	-	-
12	Contract 3708	RMEA90028	60,000	-	1,153	-
<b>Total</b>			<b>1,921,893</b>	<b>1,449</b>	<b>36,593</b>	<b>-</b>

#### Energy

<b>Total Renewable Energy</b>	<b>1,921,893</b>
<b>Total Renewable Energy at Risk</b>	<b>38,042</b>
<b>Pct of Renewable Energy at Risk</b>	<b>1.98%</b>
<b>Pct of Unknown Error at Risk</b>	<b>0.25%</b>
<b>Pct of Renewable Energy &amp; Error at Risk</b>	<b>2.23%</b>
<b>Pct of Retail Load</b>	<b>1.27%</b>

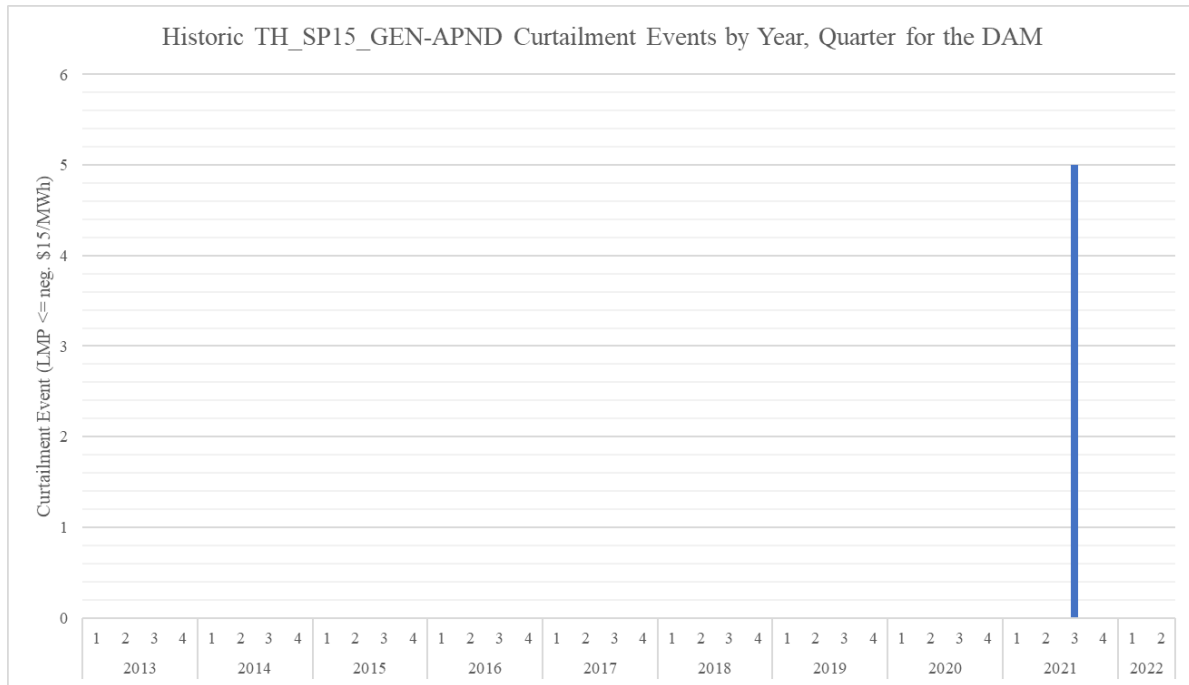
As previously mentioned, the City has also analyzed historical data on curtailments in the CAISO energy markets.

In the CAISO energy markets, much of the curtailment of renewable resources is achieved through the market process because of renewable energy resources voluntarily submitting bids into the energy markets which cause them to shut down when market conditions create low energy prices. Because of this structure the curtailment data provided will also be indicative of when negative prices occur. The City recognizes this connection and thus the analysis above as to why curtailments are not expected to increase as they have over the past few years also informs expectations of negative prices. As explained elsewhere in this document, the City has taken steps through its contracting to reduce its risk exposure to low prices and curtailment of renewable resources.

<b>Annual Curtailments (MWh)</b>			
		Wind	Solar
2018		28,686	432,357
2019		43,557	921,684
2020		90,276	1,497,220
2021		78,477	1,426,326
<b>Annual Curtailment (% of specific generation)</b>			
2018		0.17%	1.56%
2019		0.27%	3.22%
2020		0.56%	4.99%
2021		0.41%	4.19%
<b>Annual Curtailment (% of Load)</b>			
2018		0.013%	0.191%
2019		0.020%	0.420%
2020		0.041%	0.683%
2021		0.036%	0.647%

The City has also analyzed negative prices in the CAISO, as these can greatly affect the siting and operation of CCA owned and contracted assets. The City has endeavored to quantify the occurrence of such events to help limit their financial and regulatory impact. With limited means of forecasting such events, the City has assembled this additional historic analysis with the average results being used in the City’s forecasting assumptions for curtailment events.

Below are several charts which illustrate the number of historic curtailment events. The City defines a curtailment event as the times the location marginal price (LMP) drops below negative \$15/MWh. It is assumed below this price it is financially prudent to curtail a renewable generators energy production and procure renewable energy credits (RECs) on the secondary market. Estimates for the real-time market (RTM) have been averaged over the hour, so only the average price is evaluated.



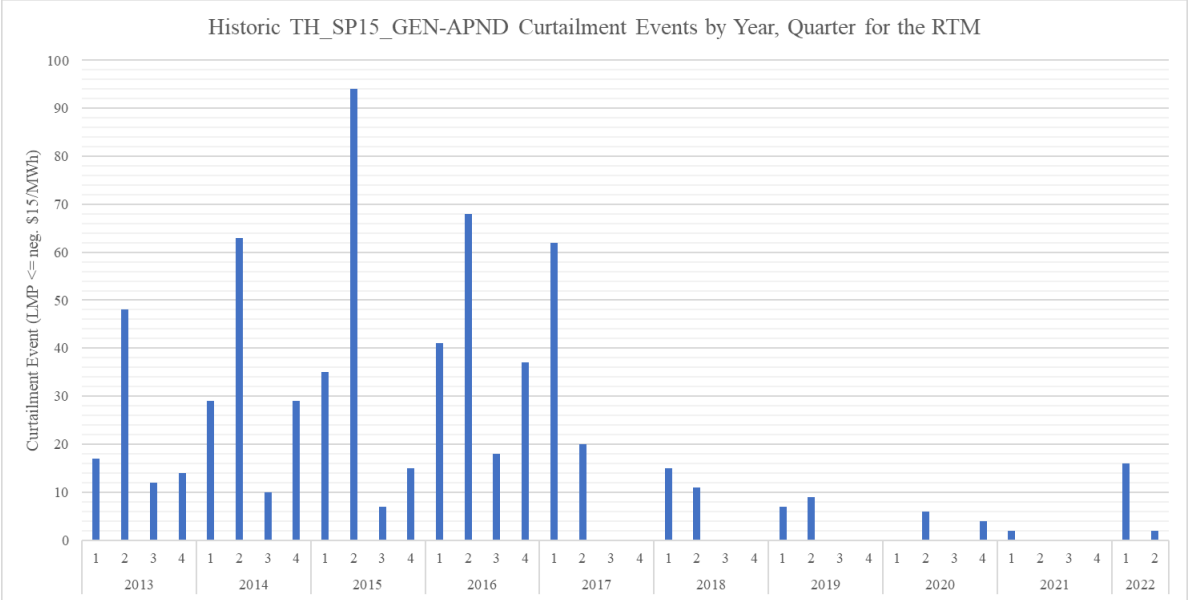


Table: SP15 DAM Curtailment Events by Year, Quarter, &amp; Hour

	2013				2014				2015				2016				2017				2018				2019				2020				2021				2022	
	Quarter				Quarter				Quarter				Quarter				Quarter				Quarter				Quarter				Quarter				Quarter				Quarter	
Hour	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Quarter	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0
Total Year	0				0				0				0				0				0				0				0				5				0	

Table: SP15 RTM Curtailment Events by Year, Quarter, &amp; Hour

	2013				2014				2015				2016				2017				2018				2019				2020				2021				2022	
	Quarter				Quarter				Quarter				Quarter				Quarter				Quarter				Quarter				Quarter				Quarter				Quarter	
Hour	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2				
1	0	1	0	0	1	0	0	4	1	2	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
2	0	4	1	1	1	2	1	3	3	1	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
3	0	9	4	3	3	7	0	3	4	3	0	0	1	2	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
4	0	5	2	0	7	9	2	3	2	6	0	0	0	4	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
5	2	7	1	1	1	4	1	2	1	1	1	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
6	4	3	1	0	0	1	0	1	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
7	2	2	1	0	0	4	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
8	0	1	0	0	0	2	2	0	0	0	3	1	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
9	2	5	0	1	0	5	1	0	4	12	1	1	3	5	4	2	5	4	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0				
10	0	6	1	2	3	7	1	1	2	8	3	3	2	9	5	6	10	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	1	0			
11	2	1	1	2	4	8	1	3	3	5	1	1	3	11	4	5	7	1	0	0	1	2	0	0	0	0	0	0	0	1	0	0	0	1	0			
12	1	0	0	1	2	3	0	4	2	6	0	2	4	3	2	10	5	2	0	0	1	0	0	0	1	1	0	0	0	1	0	1	0	1	1			
13	0	1	0	1	2	1	0	2	2	4	0	2	4	3	1	3	2	1	0	0	1	1	0	0	1	1	0	0	0	1	0	0	0	3	0			
14	1	0	0	1	2	1	0	0	2	6	0	1	4	6	1	6	5	2	0	0	2	0	0	0	4	1	0	0	0	1	0	1	1	0	0	3	1	
15	1	2	0	1	1	3	0	1	2	6	0	2	5	7	1	4	7	2	0	0	3	1	0	0	1	2	0	0	0	1	0	0	0	3	0			
16	0	0	0	0	1	3	0	1	4	7	0	1	5	7	0	1	8	2	0	0	3	1	0	0	0	1	0	0	0	0	0	0	0	2	0			
17	0	0	0	0	1	2	0	0	1	9	0	0	4	3	0	0	2	2	0	0	4	1	0	0	0	2	0	0	0	0	0	0	0	2	0			
18	0	0	0	0	0	1	0	0	0	7	0	0	2	1	0	0	2	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0			
19	1	0	0	0	0	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
20	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
23	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
24	0	1	0	0	0	0	0	0	1	3	0	1	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Total Quarter	17	48	12	14	29	63	10	29	35	94	7	15	41	68	18	37	62	20	0	0	15	11	0	4	7	9	0	0	0	6	0	4	2	0	0	16	2	
Total Year	91				131				151				164				82				26				16				10				2				18	

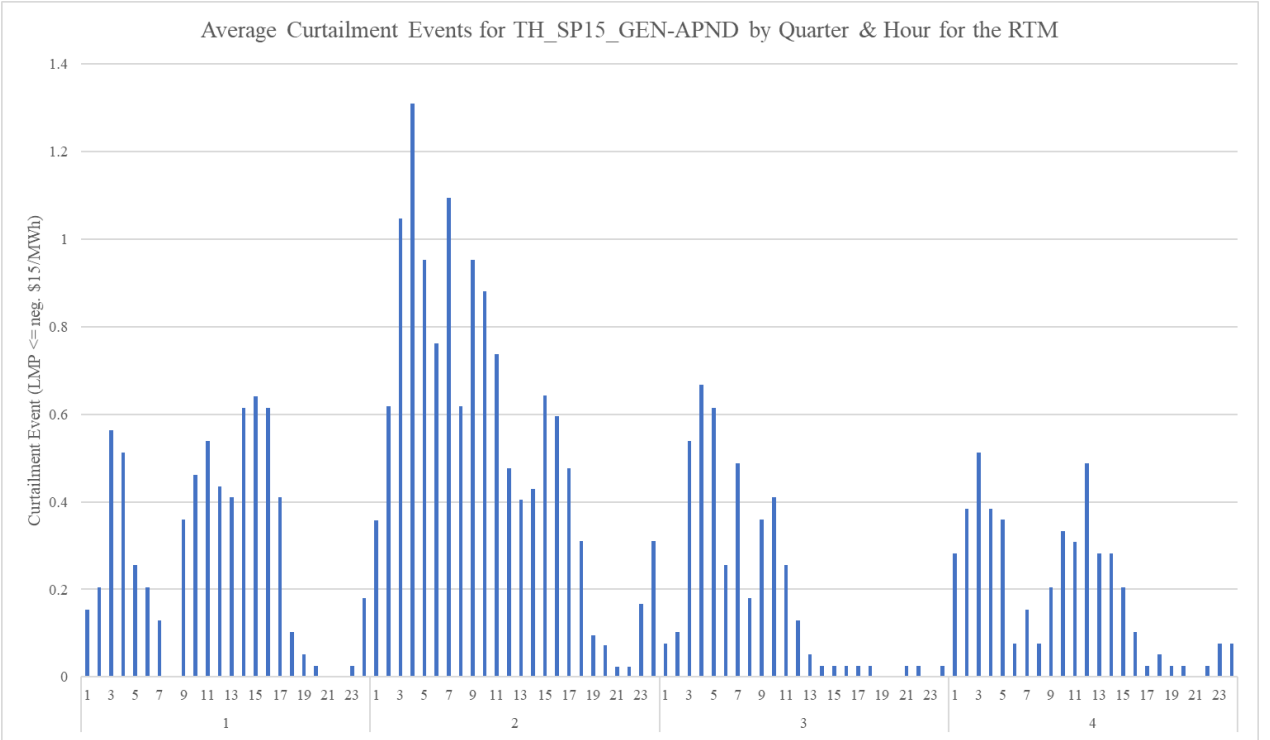
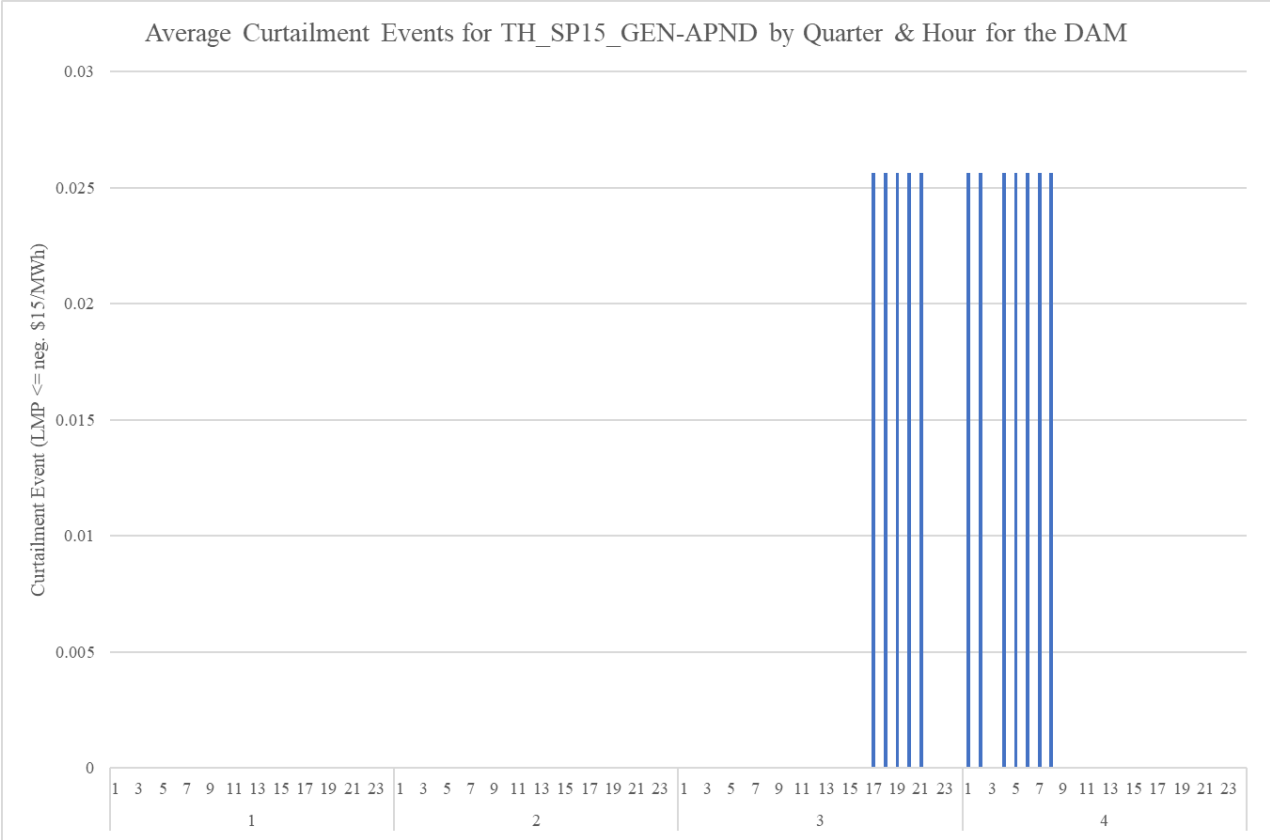


Table: TH\_SP15\_GEN-APND Average DAM  
Hourly Curtailment Event Forecast

Hour	Quarter			
	1	2	3	4
1	0.00	0.00	0.00	0.03
2	0.00	0.00	0.00	0.03
3	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.03
5	0.00	0.00	0.00	0.03
6	0.00	0.00	0.00	0.03
7	0.00	0.00	0.00	0.03
8	0.00	0.00	0.00	0.03
9	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00
17	0.00	0.00	0.03	0.00
18	0.00	0.00	0.03	0.00
19	0.00	0.00	0.03	0.00
20	0.00	0.00	0.03	0.00
21	0.00	0.00	0.03	0.00
22	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00
<b>Total Quarter</b>	0.00	0.00	0.01	0.01
<b>Total Year</b>	0.01			

Table: TH\_SP15\_GEN-APND Average RTM  
Hourly Curtailment Event Forecast

Hour	Quarter			
	1	2	3	4
1	0.15	0.36	0.08	0.28
2	0.21	0.62	0.10	0.38
3	0.56	1.05	0.54	0.51
4	0.51	1.31	0.67	0.38
5	0.26	0.95	0.62	0.36
6	0.21	0.76	0.26	0.08
7	0.13	1.10	0.49	0.15
8	0.00	0.62	0.18	0.08
9	0.36	0.95	0.36	0.21
10	0.46	0.88	0.41	0.33
11	0.54	0.74	0.26	0.31
12	0.44	0.48	0.13	0.49
13	0.41	0.40	0.05	0.28
14	0.62	0.43	0.03	0.28
15	0.64	0.64	0.03	0.21
16	0.62	0.60	0.03	0.10
17	0.41	0.48	0.03	0.03
18	0.10	0.31	0.03	0.05
19	0.05	0.10	0.00	0.03
20	0.03	0.07	0.00	0.03
21	0.00	0.02	0.03	0.00
22	0.00	0.02	0.03	0.03
23	0.03	0.17	0.00	0.08
24	0.18	0.31	0.03	0.08
<b>Total Quarter</b>	0.29	0.56	0.18	0.20
<b>Total Year</b>	1.22			

After examining the historical CAISO curtailment data, its risk analysis, and the analysis of negative pricing and curtailments, the City remains confident that the 2% minimum margin of procurement that it has institute provides the correct balance between risk management and excessive costs. The City will continue to monitor trends in the energy market, especially the curtailment levels of renewable resources, and if necessary, will adjust the minimum margin of procurement. Furthermore, the City has minimal exposure to delivery shortfalls related to project failure or delays due to the fact that its projects are already online.

Following contract execution, CalChoice will ensure that RMEA remains closely coordinated with RPS suppliers, particularly developers of any new-build resource, to maintain

an acute awareness of project development progress, including any anticipated issues that could delay expected initial deliveries or compromise overall project viability. Such communications are intended to provide the City with an early indication of such issues, which would allow “corrective procurement actions” to occur if the extent of such issues were determined to impact the City’s RPS compliance status.

While other CCA programs may choose to pursue larger planning reserves, the City observes that there does not seem to be a clear standard or related guidelines for setting such metrics. As such, the City has considered core objectives of its CCA program when establishing this metric, including compliance with pertinent regulatory mandates, specifically California’s RPS Program, as well as, and very importantly, rate competitiveness. The 2% planning reserve, which is applied annually based on the City’s projected retail sales, creates an effective margin of over-procurement equivalent to 5.2% in 2022 (relative to the prevailing interim annual RPS procurement target in that year, as previously mentioned in Section II), transitioning to 3.3% in 2030 (relative to the 60% annual procurement target).

When considering the perceived sufficiency of the City’s current planning reserve, it is also important to acknowledge the potential impacts on future retail sales imposed by the pandemic. Based on information provided by CalChoice and other CCA programs throughout the state, the City understands that there have been significant load reductions caused by current economic conditions. For renewable energy planning purposes, the City has yet to adapt its retail sales forecast to reflect such changes. Recent significant increases in inflation, and increases in interest rates to combat such inflation, are expected to slow the growth of the economy over the next few years. To the extent that that occurs and retail sales fall below expectations during CCA operations, the City is expected to accrue actual renewable energy volumes in excess of its planning targets (including reserves) and may have a margin of over-procurement that is meaningfully higher than the noted 2% (of retail

sales). Electric load within the City will be monitored over time to determine if related planning and procurement adjustments may be needed to protect the City from higher-than-anticipated renewable energy costs and related impacts to customer rates.

RMEA is aware that Section 399.13(a)(6)(A), and the ACR, note that generation variability and resource availability may impact the amount of future electricity delivered. As previously discussed, RMEA considers this potential risk during its planning process as well as during related procurement activities. The City may continue to pursue contract structures that promote volumetric stability through the application of firm delivery quantities and/or performance guarantees that provide financial remedies/penalties in the event of delivery shortfalls. If necessary, the application of such penalties could be used to: 1) as a first priority, procure additional renewable energy supply to address delivery shortfalls; or 2) in the event of a determination of non-compliance, offset the cost of related penalties. The City's intent is to achieve and maintain compliance with applicable RPS mandates, and the latter option is a last resort that is not expected to apply.

Furthermore, the City is aware of the need to perform a risk assessment in this RPS Procurement Plan and, as previously described, presents the results of such an initial assessment. At this time, and as previously noted, RMEA observes a risk management/assessment process that focuses on the identification and selection of highly experienced, financially viable renewable energy sellers, a process which is believed to materially reduce the risk of delivery shortfalls and potential compliance deficits.

RMEA continues to explore the use of quantitative tools to further understand these risks, as evidenced by the risk assessment included above. In the future, RMEA's risk management/assessment process will inevitably continue to evolve in consideration of its unique

renewable energy needs, market conditions, availability of requisite supply and ongoing track record in meeting California's RPS compliance mandates. For example, if RMEA believes that its understanding of responses to a future solicitation would improve through the use of a quantitative risk assessment tool, RMEA will accordingly pursue the use of such a tool. However, if the City and CalChoice believe that the current supplier selection process, which is intended to minimize/eliminate renewable energy delivery risk before contract execution occurs, results in the identification of: 1) low-risk supply sources that are already operational; or 2) highly experienced, financially viable project developers that have consistently demonstrated a successful development track record over time, then it may choose to forgo a related quantitative assessment as part of its risk management/assessment process. To the extent that noteworthy changes are made to such process, RMEA will describe them in a subsequent RPS Procurement Plan, if required to do so.

Because of its relatively small size, it is likely that RMEA will engage in a relatively small number of long-term renewable energy supply agreements, so a meaningful delivery shortfall (relative to expectations) or project development failure amongst such contracts would seemingly result in compliance-related deficiencies for the City (related to its long-term contracting obligation) – RMEA is aware of the financial consequences associated with such deficiencies but believes that the previously described evaluation process for prospective suppliers as well as planned procurement activities will ensure its success in meeting applicable compliance mandates. Similar issues seem less relevant with regard to short-term renewable energy purchases, as the market continues to remain robust for CCA buyers and related supply seems readily available. As previously noted, RMEA believes that a keen focus on identifying highly experienced, financially viable long-term renewable energy suppliers is the best risk

mitigation strategy for this important element of the RPS Program, and RMEA intends to observe this practice.

With respect to system reliability, the City is aware of the need to pursue a portfolio of renewable resources with diverse and complementary delivery profiles as well as complimentary infrastructure (namely, energy storage infrastructure) that will support the reshaping of renewable energy deliveries to better align with load. For example, renewable energy procurement efforts that may initially focus on relatively low-cost solar resources will often necessitate subsequent investments in co-located energy storage infrastructure and/or higher-cost baseload renewable generating technologies, such as those using geothermal, biomass and landfill gas fuel sources. These baseload renewable technologies are often priced at three-to-four times the level of in-state photovoltaic solar generation but generally provide increased capacity value (due to the more predictable, baseload generating profiles of such resources) and related reliability enhancements. By ensuring a better match of energy and load, as well as procuring resources more capable of providing ancillary services than intermittent renewable resources alone, the City seeks to mitigate potential negative system impacts such as rolling outages or violations of current standards for ancillary services. Certain of the resources that may be procured to satisfy recent capacity mandates are also expected to support grid reliability and may include baseload renewable energy resources, renewable energy plus storage configurations or stand-alone battery storage configurations, all of which would be expected to improve grid reliability by some measure. Over time, the City will balance the often competing interests of cost and reliability to support reasonably close alignment between supply and demand (reducing the need for pronounced resource ramping on the system), cost-effective procurement and overall grid reliability. The City is aware that low-cost, long-term solutions are challenging to

identify but will remain committed to pursuing a conscientious planning process that balances grid reliability, compliance demonstration and customer cost impacts.

In terms of lessons learned related to risk management, the City observes that internally adopted, above-RPS planning targets generally serve as effective mitigation measures related to RPS compliance. While setting lofty RPS targets is not a viable or desirable option for all retail sellers, the City will continue to evaluate the sufficiency of its adopted planning reserve (MMoP) to reduce the risk of RPS compliance shortfalls. If existing supply commitments happen to underperform or future RPS contracting activities impose larger than anticipated risks (such as project failure, commercial operation delays and/or under-delivery), the City may increase its noted planning reserve to provide additional protection against such risks. The extent to which such adjustments may occur is not known at this time but will be discussed, as necessary, in a future RPS Procurement Plan.

The City has also observed the value of resource diversity across a broad spectrum of considerations, including resource location, generating technology, suppliers/developers and contract structures, amongst other concerns. Long-term renewable supply commitments are inherently risky in the sense that such commitments expose the buyer and/or seller to a variety of unknown circumstances, including but not limited to evolving market prices and policy changes. Throughout a long-term contract relationship, it seems evident that geographic areas with initially low levels of negative pricing (and related curtailment of energy production) can materially change as new project development activity occurs, creating (or exacerbating) conditions of over-supply and related incidents of energy curtailment. This risk is particularly challenging to manage, as California's escalating RPS procurement mandates necessitate ongoing investment in new renewable generating infrastructure, which is often sited in resource-

rich areas that become oversaturated with similar generating technologies (and related delivery profiles). These circumstances seem inevitable and, over the course of a long-term supply relationship, may expose the contracted parties to unexpected risks, including negative prices (and related budgetary impacts) and curtailed deliveries (which may compromise the fulfillment of mandated procurement targets by the buyer). The City will reevaluate its current renewable energy planning reserve to address anticipated curtailment and/or underperformance risk associated with specific projects placed under contract.

The City is also aware that risk can be diversified through various contract structures. For example, an “index-plus” pricing structure is useful in transferring nodal/market price risk to the seller – in such structures, the buyer pays a fixed renewable premium, while the seller assumes risk associated with market price fluctuations but also receives market revenues (which could be higher or lower than anticipated) – even though the buyer receives the energy, renewable attribute and (in certain instances) capacity value as part of such a transaction, the buyer’s financial risk is generally limited to the payment of the renewable premium. For buyers who are averse to market price risk, the index-plus pricing structure effectively eliminates this concern but may result in higher overall contract costs (which may be acceptable, as a form of insurance, to mitigate market price exposure). In other structures, such as the “fixed-price” or “aggregate pricing” structure, the renewable energy premium and energy commodity (and oftentimes, capacity value) are reflected in a single price paid by the buyer – this structure deliberately allocates market price risk to the buyer, but the buyer may also pay a lower imputed renewable premium in instances where market revenues (realized when the energy commodity is delivered to the grid) closely approximate (or exceed) the aggregate renewable energy price. In evaluating potential contract structures, decisions can be made in consideration of risk allocation

preferences, and the City has pursued (and will continue to pursue) contracting structures that balance such risks over time. To date, the City has pursued both structures and will continue to do so in the future.

### **VIII. Renewable Net Short Calculation**

RMEA has provided an updated quantitative assessment, which is attached hereto as Appendix C, to support the qualitative descriptions provided in this RPS Procurement Plan. At this point in time and based on RMEA's historical supplier performance as well as anticipated renewable energy contracting outcomes, a conservative two percent risk adjustment, also referred to as the MMoP, has been incorporated in the quantitative assessment for "Online Generation" – this adjustment was informed by CalChoice's research regarding historical curtailments for wind and solar resources in the CAISO, as well as the risk analysis presented in Section VII.; a risk adjustment of two percent has been incorporated for RPS Facilities in Development, but the City observes that there are no supply commitments in place with facilities that have yet to achieve commercial operation at this point in time . If actual output happens to differ from the City's expectations, it will incorporate a larger risk adjustment in a subsequent iteration of this RPS planning process. Additional adjustments will be incorporated in future quantitative assessments based on the unique characteristics of related supply agreements secured by the City.

### **IX. Minimum Margin of Procurement (MMoP)**

The City is developing an electricity supply portfolio that will further the achievement of state mandates. The following table displays the City's intended margin of RPS over-procurement based on the differential between the SB 100 procurement targets and the City's internally adopted RPS procurement targets – this differential is defined as the City's voluntary margin of over-procurement, or VMoP. It is readily apparent that the City has decided to forgo

voluntary incremental purchases of RPS-eligible renewable energy, which is reflective of the prevailing priorities of the City’s customer base and leadership: these priorities place an emphasis on rate competitiveness and local control, rather than heightened levels of RPS procurement. This decision should not be construed as a reflection of the City’s commitment to fulfilling statewide RPS mandates. As further described below, the City has incorporated an RPS planning reserve, described as its minimum margin of procurement, or MMoP, to do just that.

### **State & Internally Adopted Renewable Energy Requirements**

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
<b>SB 100 RPS Procurement Requirement (% of Retail Sales)</b>	35.8%	38.5%	41.3%	44.0%	46.7%	49.3%	52.0%	54.7%	57.3%	60.0%	60.0%	60.0%
<b>RMEA's Minimum Internally Adopted RPS Procurement Target (% of Retail Sales)</b>	35.8%	38.5%	41.3%	44.0%	46.7%	49.3%	52.0%	54.7%	57.3%	60.0%	60.0%	60.0%
<b>RMEA's Voluntary Margin of Procurement (% of Retail Sales)</b>	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

As previously noted, the City’s core goals and objectives emphasize the important of rate competitiveness and, therefore, the organization has adopted prudent RPS planning reserves without a VMoP. To address RPS compliance risk, the City uses its risk assessments, including its renewable net short calculations and curtailment analysis, to establish a Minimum Margin of Procurement to guide RPS compliance procurement planning. The City calculated the minimum margin of procurement, or MMoP, using a 2% risk adjustment (or planning reserve) that was applied to the City’s annual retail sales estimates in each year of the planning period. Based on the manner in which the City has established its MMoP, as a 2% planning risk adjustment relative to statewide RPS mandates, the effective MMoP percentages observed by the City range from 3.3% to 5.2%, relative to the City’s projected RPS compliance need, over the ten-year planning horizon. The following chart provides additional detail regarding the effective MMoP percentages observed by the City.

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
SB 100 RPS Procurement Requirement (% of Retail Sales)	35.8%	38.5%	41.3%	44.0%	46.7%	49.3%	52.0%	54.7%	57.3%	60.0%	60.0%	60.0%
RMEA's Minimum Internally Adopted RPS Procurement Target (% of Retail Sales)	35.8%	38.5%	41.3%	44.0%	46.7%	49.3%	52.0%	54.7%	57.3%	60.0%	60.0%	60.0%
RMEA's Minimum Margin of Procurement (% of Retail Sales)	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
RMEA's Minimum Margin of Procurement (% buffer relative to RPS Mandate)	5.6%	5.2%	4.8%	4.5%	4.3%	4.1%	3.8%	3.7%	3.5%	3.3%	3.3%	3.3%

The City's MMoP is intended to address potential delivery variability for intermittent resources, curtailment risk, project delays and other operational peculiarities that may cause actual renewable energy deliveries to deviate from projections. Note that certain of the City's renewable energy deliveries are not subject to variability – such agreements reflect minimum fixed delivery quantities (or quantities with limited volumetric variability) with corresponding financial penalties (paid to the City by related sellers in the event of delivery shortfalls).

Presently, the renewable energy procurement targets reflected in the City's planning process reflect moderate, but prudent, planning reserves to allow for certain demand- and supply-side variability that could impact RPS compliance achievement. The targets reflected within this RPS Procurement Plan reflect state mandated RPS procurement targets as well as the previously described two percent planning reserve. Staff assumes that future renewable procurement targets (inclusive of planning reserves necessary to meet RPS mandates) will consider a variety of factors, including but not limited to, the operational status of prospective renewable energy facilities to be placed under contract, the experience and general development track record of each project development team (associated with new resources), resource size (capacity), the location of prospective generating resources (for new facilities) and impacts of over-procurement to the CCA program's procurement budget and customer rates. Such considerations, amongst others, will be evaluated by the City in determining whether the

proposed two percent margin of over-procurement should be adjusted in the future. To the extent the City anticipates planning risk related to its renewable energy contract commitments, it will likely adjust its margin of over procurement accordingly.

#### **IX.A. MMoP Methodology and Inputs**

The City's MMoP is intended to address an RPS failure rate at or above that which is reflected in the renewable net short reporting template. In the event of contract under-deliveries, commercial operation delays and/or project failures, the MMoP should be sufficient to ensure the City is compliant with the RPS procurement requirements. As shown in Section VII above, the City's MMoP of 2% exceeds the historical level of curtailments in the CAISO grid (shown as under 0.1% for wind and under 0.7% for solar), and also exceeds the City's risk assessment of RPS contracts (shown as 0.62% of retail load). The City's VMoP is the annual RPS-eligible minimum portfolio content identified in the City's internally adopted planning targets, which is currently equivalent to California's statewide RPS mandate.

As discussed in Section VIII, the City has incorporated risk adjustments to certain renewable energy delivery estimates associated with existing generating facilities. Achieving the City's MMoP necessitates higher levels of renewable energy procurement (ranging from 3.3% to 5.6% over the City's annual RPS compliance needs throughout the ten-year planning period), which accommodate the potential for delivery shortfalls (due to a variety of circumstances) while still allowing the City to meet prescribed RPS mandates.

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
SB 100 RPS Procurement Requirement (% of Retail Sales)	35.8%	38.5%	41.3%	44.0%	46.7%	49.3%	52.0%	54.7%	57.3%	60.0%	60.0%	60.0%
RMEA's Minimum Internally Adopted RPS Procurement Target (% of Retail Sales)	35.8%	38.5%	41.3%	44.0%	46.7%	49.3%	52.0%	54.7%	57.3%	60.0%	60.0%	60.0%
RMEA's Voluntary Margin of Procurement (% of Retail Sales, based on difference between SB 100 mandate and RMEA's internally adopted RPS target)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
RMEA's Minimum Margin of Procurement (% of Retail Sales)	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
RMEA's Minimum Margin of Procurement (% buffer relative to RPS mandate)	5.6%	5.2%	4.8%	4.5%	4.3%	4.1%	3.8%	3.7%	3.5%	3.3%	3.3%	3.3%
RMEA's Aggregate Planning Reserve: MMoP + VMoP (% buffer relative to RPS mandate)	5.6%	5.2%	4.8%	4.5%	4.3%	4.1%	3.8%	3.7%	3.5%	3.3%	3.3%	3.3%

The City will effectively ensure its compliance with applicable RPS mandates by procuring in consideration of applicable RPS mandates, plus the City's adopted MMoP. The City offers participating customers a portfolio comprised of renewable energy products which minimally meet statewide RPS procurement mandates (approximately 38.5% in 2022). Staff understands that the City Council may periodically consider changes to the level of renewable energy included within the City's default retail service offering but also understands that such content would not fall below statutory RPS mandates. If the City Council considers and adopts changes to its internal renewable energy procurement targets, the organization will accordingly update future RPS planning documents to reflect such changes.

Presently, the renewable energy procurement policy that has been adopted by the City Council specifies a renewable energy target that mirrors similar targets reflected in California's RPS Program, plus the previously described 2% planning reserve. As such, the City plans to gradually increase its procurement of RPS-eligible renewable energy over time, inclusive of the aforementioned planning reserve, which is intended to mitigate risks associated with under delivery and/or failed (or delayed) project development.

#### **IX.B. MMoP Scenarios**

The City plans to meet the annual program renewable goals reflected in the table presented in Section IX (above), including the MMoPs reflected therein. As reflected in this

table, the City's anticipated MMoP percentages range from 3.3% to 5.6% across the 10-year planning period (relative to the prevailing interim annual RPS procurement mandate). During its bid evaluation and supplier selection processes, the City considers a variety of risks and believes that such risks are sufficiently addressed within its MMoP calculation – in consideration of the City's considerable reliance on fixed-volume renewable supply commitments, it has no reason to doubt the sufficiency of the MMoP reflected in its internally adopted RPS planning targets. This noted, if the City's resource planning and contract management processes happen to identify substantive concerns with the limited new-build renewable projects included/to be included in its supply portfolio, delivery shortfalls or other issues potentially impacting the proportionate level of renewable energy reflected in its aggregate supply portfolio, the City will engage in expedited procurement processes to address such shortfalls (as a near-term solution) and also reevaluate the sufficiency of its MMoP (as a longer-term solution). As demand- and supply-side data are monitored in each year, the City may adjust planned short-term purchases and/or pursue surplus sales arrangements if actual renewable energy deliveries are tracking above its anticipated needs. By the end of each calendar year, the City hopes to manage the level of its internal planning reserve so that actual renewable energy deliveries are closely aligned with California's RPS Procurement Target.

The City will also model demand-side sensitivities that may impact MMoP calculations. In addition to load variability resulting from ongoing (minor) fluctuations in customer participation, the City will also monitor electric vehicle penetration rates, net energy metering participation rates and other considerations that may impact overall customer energy requirements and related MMoP calculations

## **X. Bid Solicitation Protocol**

### **X.A. Solicitation Protocols for Renewables Sales**

RMEA does not have immediate plans to issue a solicitation for sales of renewable energy products. If such a need arises in the future, however, the City will consider a protocol that: 1) ensures the City remains compliant with applicable RPS procurement mandates; 2) minimizes overall portfolio costs to the greatest extent practical; and 3) provides sufficient flexibility to accommodate reasonably anticipated supply-side and demand-side changes that could impact the City's overall renewable energy requirements.

### **X.B. Bid Selection Protocols**

Consistent with Section 399.13(a)(6)(C), CalChoice, on behalf of RMEA, shall conduct solicitations for requisite energy resources, including specific needs for eligible renewable energy products (reflecting locational preferences, when applicable, for such resources), generating capacity, and required online dates to assist in determining what resources fit best within the City's supply portfolio. CalChoice provides necessary analytical support and advisory services to RMEA during such processes. Since CCA program governing boards are comprised of local elected officials, these solicitations and, in particular, related procurement decisions are overseen by elected representatives of the community with guidance provided by CalChoice. Such solicitations and procurement decisions will seek to comply with locally-set targets that tend to exceed applicable RPS mandates and provide value to the community by supporting increased use of renewable energy resources. Any long-term renewable energy supply agreements resulting from RMEA's participation in CalChoice-administered solicitation processes will be brought to the City's Governing Council for approval prior to execution.

Through its relationship with CalChoice, the City is actively engaged in developing solicitation protocols for requisite renewable energy supply and has incorporated a variety of considerations in related bid requirements. Pursuant to Public Utilities Code 399.13(a)(6)(C)<sup>1</sup> and discussions with CalChoice, these considerations, which will be focused on solicitation protocols, bid evaluation and supplier selection, include:

1. Overall quality of response, inclusive of completeness, timeliness, and conformity;
2. Price and relative value within the City's supply portfolio;
3. Project location and local benefits;
4. Project development status, including but not limited to progress toward interconnection, deliverability, siting, zoning, permitting, and financing requirements;
5. Qualifications, experience, financial stability, and structure of the prospective project team (including its ownership);
6. Environmental impacts and related mitigation requirements, including impacts to air pollution within communities that have been disproportionately impacted by the existing generating fleet;
7. Potential impacts to grid reliability;
8. Potential economic benefits created within communities with high levels of poverty and unemployment;
9. Acceptance of the City's standard contract terms; and
10. Development milestone schedule, if applicable.

When evaluating future long-term renewable purchase opportunities, the City will also consider "the employment growth associated with the construction and operation of eligible renewable energy resources." More specifically, to the extent the City procures new RPS resources in solicitations where qualitative factors are considered, it will include a qualitative assessment of the extent to which proposed project development activities will support this goal.

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<sup>1</sup> Cal. Pub. Util. Code § 399.13(a)(6)(C) ("Consistent with the goal of increasing California's reliance on eligible renewable energy resources, the renewable energy procurement plan shall include all of the following: A bid solicitation setting forth the need for eligible renewable energy resources of each deliverability characteristic, required online dates, and locational preferences, if any.").

Such determinations will be based on information provided by the prospective supplier and the City's independent assessment of such information. When the City procures RPS resources, it will require bidders to submit information on projected California employment growth during construction and operation. This data will include the expected number of hires, duration of hire, and an indication of whether the bidder has entered into Project Labor Agreements or Maintenance Labor Agreements in California for the proposed project.

Pursuant to Public Utilities Code 399.13(a)(8)(A), the City will also consider the inclusion of evaluative preference for "renewable energy projects that provide environmental and economic benefits to communities afflicted with poverty or high unemployment, or that suffer from high emission levels of toxic air contaminants, criteria air pollutants, and greenhouse gases."<sup>2</sup> To the extent that the City procures RPS resources through solicitations where qualitative factors are considered, impact on disadvantaged communities will be considered. Such information will be gathered by requiring prospective suppliers to answer the following questions: Is your facility located in a community afflicted with poverty or high unemployment or that suffers from high emission levels? If so, the participant will be encouraged to describe how its proposed facility can provide the following benefits to adjacent communities:

- Projected hires from adjacent community (number and type of jobs);
- Duration of work (during construction and operation phases);
- Projected direct and indirect economic benefits to the local economy (i.e., payroll, taxes, services);

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<sup>2</sup> Cal. Pub. Util. Code § 399.13(a)(8)(A) ("In soliciting and procuring eligible renewable energy resources for California-based projects, each electrical corporation shall give preference to renewable energy projects that provide environmental and economic benefits to communities afflicted with poverty or high unemployment, or that suffer from high emission levels of toxic air contaminants, criteria air pollutants, and greenhouse gases.").

- Emissions reduction – identify existing generation sources by fuel source within 6 miles of proposed facility and indicate whether the proposed facility will replace/supplant the identified generation sources; and
- To the extent that the proposed generating facility is expected to replace/supplant an existing generating facility, the prospective supplier will be asked to quantify the associated emission impacts of this transition.

Certain of these considerations were incorporated during the evaluation of responses submitted through CalChoice’s recent solicitation for long-term renewable energy supply; others will be reflected in future solicitations, as appropriate. Based on the success of its ongoing solicitation process(es), RMEA may adapt these considerations.

Consistent with the direction in the ACR, RMEA has provided a copy of its most recent solicitation materials to Commission Energy Division staff. RMEA’s most recent solicitation information is available at the following website:

<https://californiachoiceenergyauthority.com/our-services/>.

### **X.C. LCBF Criteria**

The Least-Cost Best Fit methodologies approved by the Commission pursuant to D.04-07-029, D.11-04-030, D.12-11-016, D.14-11-042, and D.16-12-044 are expressly only directly applicable to IOUs and the Commission does not have jurisdiction over the solicitation protocols of CCAs. However, consistent with Section 399.13(a)(9),<sup>3</sup> RMEA considers best-fit attributes to help minimize overall renewable energy procurement costs while generally supporting electric grid reliability.

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<sup>3</sup> Cal. Pub. Util. Code § 399.13(a)(9) (“In soliciting and procuring eligible renewable energy resources, each retail seller shall consider the best-fit attributes of resource types that ensure a balanced resource mix to maintain the reliability of the electrical grid.”).

In particular, the City anticipates considering “least cost best fit” (“LCBF”) during the evaluation of responses to its future renewable energy solicitation(s). From the City’s perspective, use of the term “costs” should appropriately include considerations beyond the basic price of renewable energy. More specifically, costs should include a broad range of considerations, such as: (1) reputational damage resulting from failure to meet state-mandated and/or internally established renewable energy procurement targets; (2) compliance penalties resulting from failed project development efforts or delivery shortfalls; (3) administrative complexities related to dealing with inexperienced suppliers (such as prolonged contract negotiation processes and uncertainties related to project milestone timing and achievement); and (4) impacts to planning certainty resulting from higher risk projects. These factors, as well as various others, will be considered by the City as components of its cost evaluation processes, which may lead to the selection of offers that aren’t necessarily the lowest cost option(s), as expressed on a dollar-per-MWh basis. With regard to “fit”, this aspect of a prospective supply opportunity has as much to do with compatibility (between the City and its suppliers) and alignment with key local objectives as it does with balancing customer usage and expected project deliveries, particularly when considering long-term contracting opportunities that will necessitate a constructive working relationship over a period of ten years or more. The City also interprets the term “fit” to mean the general suitability of a project opportunity in promoting grid reliability – while the City has no explicit operational or maintenance responsibilities related to the local distribution system serving its customers or the bulk electric system at large, it is aware of the profound importance of supporting grid reliability through its procurement processes. With this in mind, the City will make best efforts to balance the demands of California’s rigorous RPS compliance mandates with its interest in promoting such

reliability. This is no small task, and the City expects that considerations related to grid reliability will be incorporated at each stage of its planning and procurement processes but also acknowledges that the full scope of its RPS contract/resource portfolio (including related impacts to grid reliability) will significantly evolve throughout the organization's operating history. Over time, the City expects to thoughtfully assemble a diversified portfolio of RPS contracts/resources that will not only contribute to the City's achievement of applicable compliance mandates but also to improved stability and reliability of California's electric system. As such, the City's LCBF methodology will consider a broad range of components, including those previously noted, balancing a variety of pertinent considerations at the time each renewable purchase opportunity is being evaluated.

Additionally, the requirement of Section 399.13(a)(9) to give preference to renewable projects located in certain communities is expressly only applicable to "electrical corporations" and is not mandatory for CCAs.<sup>4</sup> However, the City recognizes the need to help mitigate the impacts of air pollution in regions of the state where communities have been disproportionately impacted by the existing generating fleet as well as the need to bring economic benefits to communities with high levels of poverty and unemployment. Consistent with this recognition, the City will consider the manner in which air pollution may be impacted during its renewable energy solicitation process(es) and related project selection.

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<sup>4</sup> Cal. Pub. Util. Code § 399.13(a)(7)(1) ("In soliciting and procuring eligible renewable energy resources for California-based projects, each electrical corporation shall give preference to renewable energy projects that provide environmental and economic benefits to communities afflicted with poverty or high unemployment, or that suffer from high emission levels of toxic air contaminants, criteria air pollutants, and greenhouse gases.").

## **XI. Safety Considerations**

RMEA holds safety as a top priority. Since RMEA does not own, operate, or control generation facilities, RMEA's procurement of renewable resources does not present any unique safety risks. This Section describes how RMEA has taken actions to reduce the safety risks posed by its renewable resource portfolio and how RMEA supports the state's environmental, safety, and energy policy goals.

As the City pursues future renewable energy purchases, it will consider requiring verbiage addressing adherence (of the seller/project operator) to prudent electrical practices and applicable safety requirements, including compliance with laws and regulations relating to safety. During future contracting efforts, the City will perform an assessment of the supplier's willingness to include such provisions as well as any related impacts to pricing/cost – the City is aware that requesting more stringent processes and/or requirements may trigger requested price increases by the seller/supplier. To the extent that product pricing would meaningfully increase due to the inclusion of such provisions, the City would need to evaluate budgetary impacts and other risks before proceeding. The City is hopeful that most suppliers will be agreeable to the inclusion of such provisions and will be diligent in requesting such language in its future contracts. In addition, RMEA has provided additional information below on its existing safety practices.

### **XI.1. Wildfire Risks and Vegetation Management**

In negotiating contracts with renewable generating facilities, RMEA works to ensure that the facility operator complies with all relevant safety requirements associated with the maintenance and operation of the facility. In these agreements, RMEA includes contract provisions that require the counter party to operate and maintain the facility in compliance with

all relevant laws and prudent operating practices.

At this point in time, the City has yet to adopt specific procurement policies or preferences focused on the acquisition of forest biomass resources. The City is aware of the mitigating impacts that biomass generators, which use forestry waste as feedstock, may have on wildfire risk and will consider the adoption of a related procurement policy in the future. Furthermore, the City does not believe that any of its contracts with specified renewable generating facilities are located within high fire risk areas. In the future, the City will coordinate with CalChoice when considering project locations that may be located in fire-prone regions as well as related risk adjustment factors that may be appropriate for such facilities.

In future solicitations, RMEA will identify whether any of the bidding generating facilities are located within Tier 2 or Tier 3 of the Commission's Fire-Threat Map. When evaluating executing a contract with a facility located in Tier 2 or Tier 3, RMEA will consider requiring the seller to demonstrate that it taken adequate precautions associated with the facility's elevated risks, including specific wildfire prevention and safety measures for any construction, operation, and maintenance activities.

## **XI.2. Decommissioning Facilities**

To date, the City has not developed any plans or requirements related to the disposition of generating facilities following completion of applicable delivery terms. RMEA's contracts with renewable generating facilities generally require that the facility operates in compliance with all applicable laws and prudent operating practices. The City assumes this broad terminology generally entails the safe disposition of assets following expiration of their useful life (to the extent that the useful life of such facilities expires at the same time as the noted delivery term involving RMEA). This noted, the duration of RMEA's renewable energy supply commitments

is expected to be shorter than the useful life of most, if not all, facilities placed under contract, so it will be impractical for RMEA to monitor such activities after its relationship with suppliers has ended.

For future contract negotiations, RMEA will evaluate requiring the seller to provide a project safety plan or a similar type of reporting document, which will include information on procedures for identifying and remediating safety hazards, as well as describing any relevant requirements (such as those associated with the permitting of the facility) for the decommissioning of the facility.

### **XI.3. Climate Change Adaptation**

The City has not adopted procurement policies or preferences relating specifically to climate change risks. In future solicitations, the City will consider developing additional bid evaluation criteria based on climate change risk factors, including but not limited to risks associated with facilities located in regions that are forecasted to be impacted by higher instances of sea-level rise, flooding, wildfires, and/or elevated temperatures.

### **XI.4. Impacts During Public Safety Power Shut-off (PSPS) Events**

While the City does not have any specific predictions regarding future impacts related to PSPS events, it is likely that a PSPS event impacting the City would marginally reduce retail electric sales for CCA customers and, as a result, would generate a very small increase in the proportionate share of renewable energy supply accruing to the City (if renewable supply agreements continue to perform as expected during such events).

RMEA is considering the need to evaluate the impact of prior PSPS events on its renewable generating facilities (under contract) to quantify the amount of generation that was lost due to the facility being taken offline by a PSPS event. RMEA may also assess the risk of

the loss of future generation associated with PSPS events both for facilities already online and for facilities under development. RMEA's preliminary assessment is that the total quantity of any PSPS-related reductions in RPS-eligible generation (associated with the facilities in RMEA's portfolio) is likely minimal and generally offset by the reduction in retail sales (also related to the PSPS event). In light of this, the likelihood of a material impact to the City's renewable energy planning process or related performance metrics is extremely low.

#### **XI.5. Biomass Procurement**

While RMEA has no specific biases (for or against) biomass resources, the prospect of procuring such resources will be dependent upon offers received during future solicitation processes. In fact, the City has already entered into a long-term PCC3 supply agreement, which will be sourced from existing biomass facilities located within California – the RPS procurement opportunity was selected in consideration of: 1) product availability and the suitability of such product in the City's overall RPS supply portfolio; 2) cost-effectiveness; and 3) volumetric predictability (due to the anticipated baseload delivery profile associated with biomass generating resources). To date, biomass procurement opportunities have been limited, relative to other available renewable energy procurement opportunities, and have been comparatively costly (often 200%, or more, relative to pricing levels associated with other renewable generating technologies). To the extent that future biomass offers/proposals are competitive (with similar offers received from other resource types) and/or in the event the City adopts policies explicitly supporting the acquisition of biomass energy resources, it will consider further inclusion of biomass energy within its future renewable energy supply portfolio. Biomass procurement opportunities may also be considered as a means to increase resource adequacy capacity under contract.

## **XII. Consideration of Price Adjustment Mechanisms**

In the future, and consistent with SB 350 and SB 100, RMEA will review the prospects of incorporating price adjustments in contracts with online dates more than 24 months after the date of contract execution. As noted in the ACR, such price adjustments could include price indexing to key components or to the Consumer Price Index. To date, incorporating such provisions has been challenging due to the inability of buyers and sellers to reach mutually agreeable terms related to pricing adjustments.

## **XIII. Curtailment Frequency, Forecasting, Costs**

This Section responds to the questions presented in Section 6.13 of the ACR<sup>5</sup> and describe RMEA's strategies and experience so far in managing RMEA's exposure to negative pricing events, overgeneration, and economic curtailment for RMEA's region and portfolio of renewable resources.

### **XIII.1. Factors Having the Most Impact on the Projected Increases in Incidences of Overgeneration and Negative Market Price Hours**

RMEA continues to learn about California's evolving energy market, including information and considerations related to energy curtailment, potential cost impacts, contracting considerations and other concerns. The following represents RMEA's understanding of this topic, which may impact future procurement processes.

Due in large part to the rapid increase in the amount of wind and solar generating facilities that have been brought online throughout the western United States, the California Independent System Operator's ("CAISO") balancing authority area has experienced an increasing frequency and magnitude of curtailment and negative pricing events. As of the end of 2019, California had over 12,800 MW of solar, 9,400 MW of behind-the-meter solar, and 5,900

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<sup>5</sup> ACR at 33-34.

MW of wind.<sup>6</sup> This increased capacity results in discrete periods where the majority of load in the CAISO is served by solar and wind resources. The monthly maximum load served by wind and solar in the CAISO has averaged 64.3% over the past 4 years (May 2018 to May 2022), and in May of 2022 the monthly maximum load served by wind and solar was just under 95%, while the maximum 5-minute amount of all renewables serving load was 103.5%.<sup>7</sup> To address the resulting instances of over-supply, the amount of curtailment of wind and solar in the CAISO has significantly increased each year from 2015 through 2020, totaling 187,000 MWh in 2015, 308,000 MWh in 2016, 379,510 MWh in 2017, 461,043 MWh in 2018, 965,241 MWh in 2019, and 1,586,500 MWh in 2020.<sup>8</sup> For 2021, the total level of wind and solar curtailments was 1,504,803 MWh.<sup>9</sup> Curtailment typically occurs most frequently during the months of March, April, and May when hydroelectric generation is historically at its highest. Curtailment levels and percentages for the CAISO, as well as an analysis of negative prices and forecasted curtailments from those negative prices, were presented above in Section VII.

In the CAISO energy markets, much of the curtailment of renewable resources is achieved through the market process because of renewable energy resources voluntarily submitting bids into the energy markets, which cause them to shut down when market conditions create low energy prices. Because of this structure, the curtailment data provided will also be indicative of when negative prices occur. The City recognizes this connection and thus the analysis above in Section VII as to why curtailments are not expected to increase as they have

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<sup>6</sup> California Energy Commission, Renewable Energy Tracking Progress, Feb. 2020, at 6, *available at* [https://www.energy.ca.gov/sites/default/files/2019-12/renewable\\_ada.pdf](https://www.energy.ca.gov/sites/default/files/2019-12/renewable_ada.pdf).

<sup>7</sup> CAISO, Monthly Renewables Performance Report, May 2022, *available at* <http://www.caiso.com/Documents/MonthlyRenewablesPerformanceReport-May2022.html>.

<sup>8</sup> CAISO, Managing Oversupply, Wind and Solar Curtailment Totals, updated June 6, 2021, *available at* <http://www.caiso.com/informed/Pages/ManagingOversupply.aspx>.

<sup>9</sup> See Curtailment table in Section VII above.

over the past few years will apply to negative prices in a similar manner to curtailments. This has influenced CalChoice's ten-year negative price forecast, which mirrors the frequency of historical renewable energy curtailments. As explained elsewhere in this document, the City has taken steps through its contracting to reduce its risk exposure to low prices and curtailment of renewable resources.

RMEA will continue to monitor this situation to the extent such circumstances are likely to impact contract administration and/or future procurement activities. If prospective renewable generating opportunities are located in areas that are prone to frequent instances of negative market pricing, RMEA will be sure to evaluate such data to better understand prospective financial impacts and/or pursue contractual pricing structures that will insulate the CCA program from such risks.

### **XIII.2. Written Description of Quantitative Analysis of Forecast of the Number of Hours Per Year of Negative Market Pricing for the Next 10 Years**

Based on RMEA's existing renewable energy supply agreements, the CCA program has yet to incur exposure to negative price risk (related to requisite renewable energy transactions). Historical renewable energy deliveries have been priced on an index-plus basis, capping RMEA's financial exposure to the stated renewable energy premium in such contracts. RMEA recently began taking deliveries under new supply agreements (with 2021 and 2022 delivery start dates), which use both index-plus and fixed pricing structures. These contracts, however, reflect explicit negative pricing protections for the buyer, which cap RMEA's financial exposure at the stated bundled renewable energy cost. To the extent that negative pricing occurs, the sellers, which also serve as the scheduling coordinators under each supply agreement, would be responsible for such costs or could choose to pursue curtailment, if negative pricing was too punitive to justify facility operation. However, these contracts also reflect production

guarantees, which would limit prospective curtailment activities based on a guaranteed minimum level of renewable energy production, below which the seller would be subject to payment of financial penalties to RMEA. Based on early-stage deliveries from these contracts, energy curtailments have not resulted in production deviations relative to the City's expectations – typical resource intermittency issues, however, have results in some variations from forecasted production levels. RMEA has started monitoring nodal pricing levels associated with these contracts (see the analysis of negative prices provided above in section VII) and if negative prices become prevalent, the City will prepare a negative price forecast to assist in its understanding of future production deficits (that possibly occur under such scenarios) – because pricing conditions are prone to sudden and significant changes, the “shelf life” of such a forecast is expected to be very brief and subject to regular updates.

As described above, RMEA has evaluated historical curtailment trends for wind and solar generating technologies located within the CAISO footprint over the past four years and believes such data may be instructive in understanding the energy curtailment risk associated with these generating technologies into the future. CalChoice's ten-year negative price forecast mirrors the frequency of historical renewable energy curtailments. As described above, RMEA has taken this forecast of curtailment and negative pricing into consideration in developing its MMoP.

RMEA is aware that curtailment activities may reduce expected renewable energy deliveries, but based on historical nodal pricing adjacent to the noted wind resources, RMEA expects that curtailment activities will be limited. Moving forward, RMEA will continue to monitor historical prices at such nodes, and if instances of negative pricing become prevalent, it will prepare the noted forecast to better understand the periods of time during which curtailment activities may be more likely to occur (even though such activities would not impose direct

financial impacts to RMEA). Any information/projections prepared by RMEA in this regard will be shared in a subsequent RPS Procurement Plan.

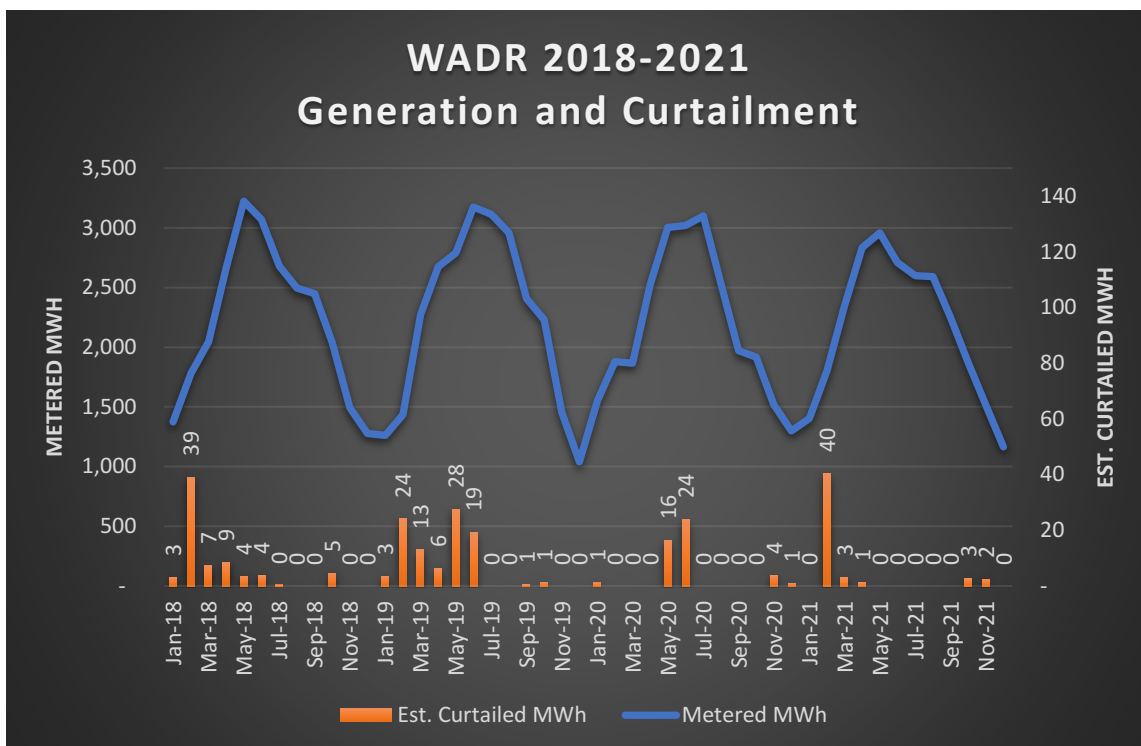
### **XIII.3. Experience, to Date, With Managing Exposure to Negative Market Prices and/or Lessons Learned from Other Retail Sellers in California**

Based on RMEA's existing renewable energy supply agreements, historical renewable energy deliveries have utilized index-plus pricing structures and fixed/firm volumetric commitments. As such, RMEA has not been previously exposed to negative price risk (related to its renewable supply portfolio) and has not needed to manage exposure to negative market prices. This approach to renewable energy contracting was deliberate, allowing RMEA to build operational experience and knowledge regarding California's energy market before pursuing contract structures that required a deeper understanding of market tendencies, increased data analysis and more intensive coordination with renewable energy suppliers.

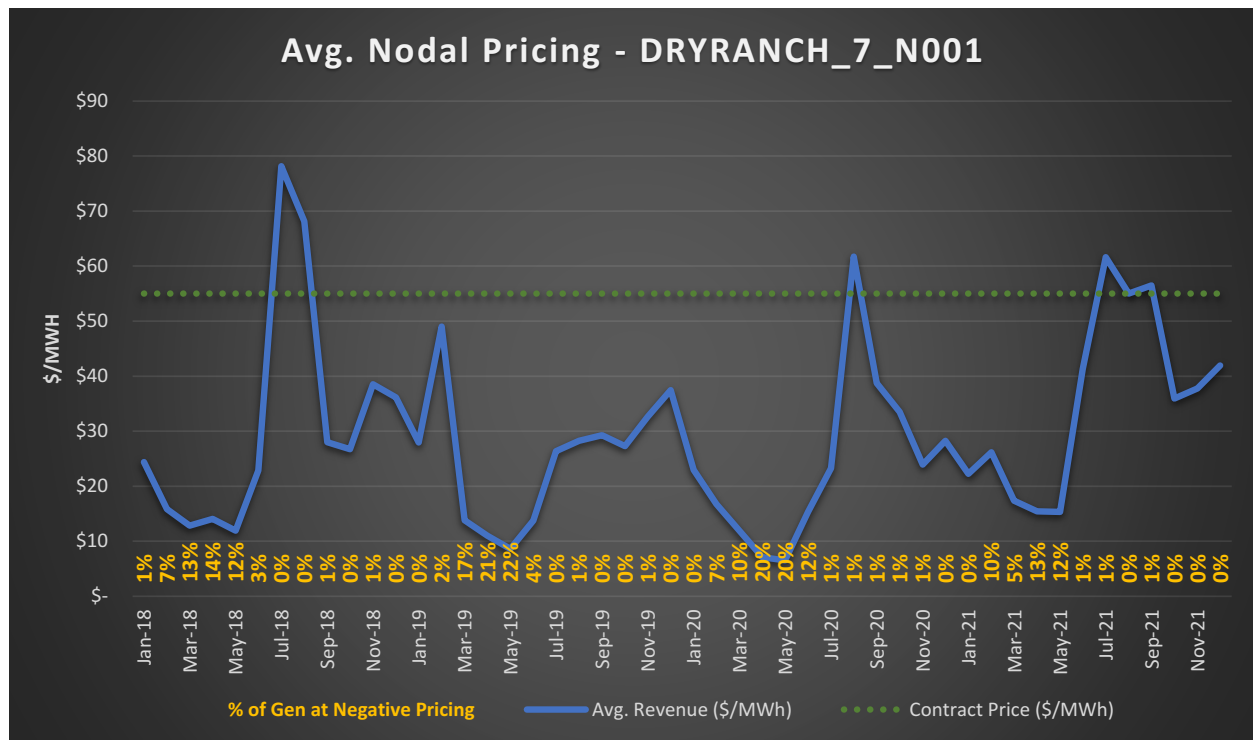
Based on its association with CalChoice, which facilitates informational sharing and interagency coordination amongst its members, the CCA program has been made aware of LCE's ongoing experiences managing negative pricing and curtailment risk. LCE has advised CalChoice of the following information regarding its first long-term power purchase agreement with the 10 MW Western Antelope Dry Ranch ("WADR") photovoltaic solar facility, which is located in Lancaster. During its operating history with this renewable generating facility, LCE has experienced instances of negative pricing at certain points in time. Recent data suggests that such instances are more frequent during the Spring season (months of March, April and May) and, consistent with the CCA program's observations regarding curtailment reflected in Section XIII.1, indicates that suppressed pricing generally results from relatively strong solar production throughout the region, coupled with comparatively low energy usage (when moderate seasonal temperatures prevail). To the extent that California experiences strong regional hydroelectric

production/imports, negative pricing pressures may be exacerbated.

Based on 2018, 2019, 2020, and 2021 historical data, CalChoice observed that negative prices have impacted facility generation during 7% to 22% of solar-producing hours during the months of February, March, and April. Negative pricing in other months is far less prevalent, affecting facility generation on a limited basis (occurring during zero to 10% of hours in which facility generation has occurred). In terms of curtailment, the CCA program understands that LCE has developed a bidding strategy with its scheduling coordinator that limits exposure to negative pricing based on a pre-determined bid floor (meaning, a pre-determined negative price, below which facility generation would be curtailed), but LCE has only experienced facility curtailments totaling 261 MWh over the aforementioned four-year period, or 0.2% of total potential energy production (which approximates 106,000 MWh during this same four-year period). The impacts of curtailment/negative pricing costs incurred by LCE have been similarly limited. The following chart indicates total monthly generation from the WADR facility during the 2018, 2019, 2020, and 2021 calendar years as well as estimated monthly curtailed MWh (note the differences in scale reflected on each axis).



Adjacent nodal pricing also remains relatively strong, despite substantial solar generation within the region. Average energy pricing at the DRYRANCH\_7\_N001 node, the basis for WADR energy settlements, continues to show limited incidents of negative pricing. Over the four-year period reflected in CalChoice’s analysis, average revenues collected by LCE for WADR-generated electricity are \$28.39/MWh. The following chart reflects average nodal pricing during the 2018, 2019, 2020, and 2021 calendar years as well as the percentage of WADR generation occurring during periods of negative pricing.



Over time, CalChoice will continue monitoring pricing and curtailment data to determine if regional grid conditions are materially changing – four years is a relatively brief period of time for such an analysis, particularly when the composition of resources interconnected to California’s bulk electric system continues to undergo significant changes, and while the City finds this information to be helpful, it is also mindful that such changes may substantially alter the trajectory of pricing data at this node. To the extent that negative prices become more severe (meaning, more deeply negative), the CCA program understands that LCE may adapt its bidding strategy to limit potential financial impacts. Curtailed energy volumes will also be monitored by CalChoice over time, but based on MWh curtailed to date, the CCA program understands that LCE does not foresee any imminent concerns impacting its achievement of compliance with RPS procurement mandates. CalChoice is prepared to support similar data monitoring for other supply opportunities that may be pursued by its membership and will coordinate with such

members regarding pertinent bidding strategies, as appropriate.

If the CCA program pursues supply agreements that could expose the organization to negative pricing and curtailment risk, the CCA program would consult with CalChoice to perform pertinent analyses that would be intended to bound prospective exposure (in terms of frequency and potential overall cost) related to negative pricing.

When RMEA pursues future supply agreements that could expose the organization to such risk, and before such procurement opportunities are executed, RMEA would consult with CalChoice to perform pertinent analyses that will be intended to bound prospective exposure (in terms of frequency and potential overall cost) related to negative pricing. Based on information/data derived through such analyses, RMEA would coordinate with CalChoice and its scheduling coordinator to develop a bidding strategy, if deemed necessary, that would create desired limitations to such negative price risk, acknowledging however, that any curtailment decisions (related to negative pricing) would reduce the expected quantity of renewable energy to be received from such contracts – such circumstances could necessitate supplemental procurement, if meaningful delivery shortfalls occur.

As for lessons learned from other retail sellers, RMEA continues to be aware that negative pricing can be particularly punitive in certain geographic regions, so it will need to carefully evaluate any new renewable supply opportunities in consideration of such risk or pursue contract structures – RMEA is aware that pursuing firm/fixed delivery quantities, as opposed to as-available supply arrangements, can meaningfully reduce, if not entirely eliminate, concerns related to negative pricing (and related decisions to pursue curtailment). If RMEA gains additional insight based on future experience/exposure to negative pricing, it will share such information, if required to do so, in a future RPS Procurement Plan.

#### **XIII.4. Direct Costs Incurred, to Date, for Incidences of Overgeneration and Associated Negative Market Prices**

To date, RMEA's renewable energy procurement efforts and associated contracts have not resulted in the accrual of direct costs related to incidences of overgeneration resulting from negative pricing.

#### **XIII.5. An Overall Strategy for Managing the Overall Cost Impact of Increasing Incidences of Overgeneration and Negative Market Prices**

While curtailment is a viable renewable integration strategy that may be more cost-effective than other options, there are potential negative consequences from excessive curtailment. Curtailment of solar and wind represents a lost opportunity to generate zero GHG emitting electricity, and excessive curtailment could impact the ability of the state to meet its environmental and energy policy goals. Additionally, these over-supply situations expose ratepayers to increased costs because their load serving entities must either economically curtail the generating resource (and often pay for the electricity that was not generated) or generate power and be exposed to negative prices. Because these conditions are largely driven by state policy, it is appropriate to consider macro-level mitigation measures through CAISO initiatives, Commission rulemakings, and possibly even legislation. There are a number of measures and policies that have already been implemented or are currently being pursued that will have significant impacts on how substantial curtailment will be in the future. This includes the expansion of the Energy Imbalance Market, improvements to the CAISO market design and structure, enhanced forecasting capabilities, time of use rates, improved electric vehicle charging functionalities, and smart deployment of distributed energy resources. The Commission's Integrated Resource Plan ("IRP") proceeding will be an appropriate forum to measure the impact of these policies and the effect that they will have on future curtailment. These new measures

will need to be modeled and incorporated into forecasts of future curtailment.

RMEA will consider the impact of curtailment and negative pricing on its individual portfolio and will factor potential curtailment into its long-term planning, as appropriate. Due to the difficulty in accurately forecasting curtailment, RMEA will review available historical data on curtailment and negative pricing within regions where RMEA may contract for renewable generating resources – RMEA notes, however, that it only recently began taking energy deliveries under a contract that subject its organization to curtailment risk, so RMEA is currently gathering information regarding its early-stage experiences to determine whether additional analysis will be necessary; with RMEA taking additional renewable energy deliveries in 2022 (from more recently executed supply agreements with market-based settlement mechanisms), it will more closely monitor historical market prices in proximity to related generating facilities – if instances of negative pricing become more prevalent at nodes adjacent to active project sites, RMEA may impute risk-related adjustments in its planning assumptions. In future contracting efforts, RMEA will remain aware of curtailment risk (stemming from instances of over-generation and related negative pricing) and will evaluate pertinent data to better understand the potential frequency of curtailment activities, including an assessment of historical pricing related to the point(s) of delivery that will be applicable in such supply agreements. While RMEA has not yet developed an individualized forecast of future curtailment for any particular project opportunity or technology type, RMEA will factor potential curtailment into its minimum margin of procurement (described in Section IX) and may also factor this consideration in future iterations of its Risk Assessment (Section VII). To the extent that RMEA is engaged in renewable supply agreements which include curtailment provisions, it will take actions to limit the impacts of curtailment on its ratepayers and progress in meeting pertinent compliance mandates. During its

current and future renewable contracting efforts, RMEA will continue to pursue contract terms that recognize and limit the potential financial impacts of negative pricing and provide RMEA greater flexibility to direct economic curtailment, if this becomes necessary.

#### **XIII.6. Contract Terms Included in RPS Contracts Intended to Reduce the Likelihood of Curtailment or Protect Against Negative Prices.**

As discussed previously, the City has incorporated terms in its contracts to limit consequences from negative prices. These include contracts with fixed quantities of RPS resources, and contracts with penalties for failure to deliver required amounts of RPS energy. An example of such language included in City contracts is:

**Guaranteed Energy Production:** Seller shall be required to deliver to Buyer no less than the Guaranteed Energy Production (as defined below) in each two (2) Contract Year block (as opposed to rolling) period during the Delivery Term (“**Performance Measurement Period**”). “**Guaranteed Energy Production**” means an amount of Product, as measured in MWh, equal to one-hundred fifty percent (150% of the average Expected Energy (as set forth on the Cover Sheet) for each Performance Measurement Period. The calculation will be performed once each Performance Measurement Period, beginning with the second anniversary of the Delivery Term Start Date.

#### **XIV. Cost Quantification**

RMEA has provided an updated Cost Quantification Table as Appendix E, which reflects renewable energy supply commitments that have been executed since submittal of its Final 2021 RPS Procurement Plan. Pursuant to direction in the ACR, the City has entered pertinent data in Appendix E. Pursuant to the direction in the ACR, RMEA has completed those cells in the Cost Quantification table that correspond to Table 3, Rows 1-5 in the ACR.

## XV. Coordination with Integrated Resource Planning Proceeding

The resources identified in this RPS Procurement Plan are consistent with the resources identified in RMEA's most recent IRP, which was approved by RMEA's governing board and provided to the Commission for certification on September 1, 2020. As required by the ACR,<sup>10</sup> RMEA includes the following table that describes how RMEA's 2022 RPS Procurement Plan conforms with the determinations made in the IRP Proceedings (R.16-02-007 and R.20-05-003). As required, RMEA will highlight the interrelationships of its RPS and IRP planning processes in a future iteration of this RPS Procurement Plan. The following table reflects RMEA's most recent updates, as reflected in this RPS Procurement Plan, regarding RPS alignment with the IRP process.

IRP Section Subsection	RPS Alignment in IRP	
<b>III. Study Results</b> <b>A. Conforming and Alternative Portfolios</b>	Retail sellers should explain how the RPS resources they plan to procure, outlined in their RPS Plan, will align with each of their Conforming Portfolios being developed in their IRP Plans for Commission approval and certification. This should include:	
	<i>1. Existing RPS resources that the retail seller owns or contracts.</i> <i>2. Existing RPS resources that the retail seller plans to contract with in the future.</i> <i>3. New RPS resources that the retail seller plans to invest in.</i> <i>4. New and existing resources that will be used to meet Mid-Term Reliability obligations</i>	The City continues to engage in renewable energy contracting efforts and expects to continue participating in/administering such procurement processes, via its relationship with CalChoice, to augment current RPS supply commitments and further progress towards the emission metrics reflected in the City's IRP.  As part of its 2020 IRP filing, the City submitted two Preferred Conforming Portfolios that achieve its proportional share of both the 46 and 38 MMT GHG targets. Under each of these portfolios, the City's anticipated use of new and existing resources were added to the portfolio to achieve the relevant GHG targets as well as RPS procurement requirements, including the 65% long-term contracting

<sup>10</sup> ACR at 30-33.

	<p><i>adopted in D.21-06-035.</i></p>	<p>requirement.</p> <p>For the 2022 IRP filings, the June 15, 2022 Administrative Law Judge’s Ruling Finalizing Load Forecasts and Greenhouse Gas Emissions Benchmarks for 2022 Integrated Resource Plan Filings indicates that the IRP filings should be planning for 2035 as the target year and adopts planning targets of 30 MMT and 25 MMT. These are in addition to the requirements in D.22-02-004 which require LSEs to meet their proportional share of the 2030 target of 38 MMT and plan for a 2030 target of 30 MMT.</p> <p>Description of 2020 Preferred Conforming Portfolios:</p> <ul style="list-style-type: none"> <li>• 46 MMT Conforming Portfolio: Portfolio that achieves the City’s proportional share of a 46 MMT statewide GHG target <ul style="list-style-type: none"> <li>○ The 46 MMT Conforming Portfolio assumed the use of RPS resources currently reflected in the City’s supply portfolio, as further described in other submittals to the Commission and this RPS Procurement Plan, as well as the other new RPS resources, which were deemed necessary to achieve pertinent emission parameters associated with the 46 MMT Conforming Portfolio. In aggregate, these new RPS resource would include: 15 MW of new solar; and 13 MW of new wind</li> <li>○ Future contracts with the following additional existing RPS resources were also deemed necessary to meet pertinent emission parameters associated with the 46 MMT Conforming Portfolio. In aggregate, these existing RPS resource would include: 1 MW biomass; 5 MW small hydro; and 15 MW wind</li> <li>○ The City’s 46 MMT portfolio conformed to the procurement timing, resource quantities, and general resource attributes identified in the 46</li> </ul> </li> </ul>
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		<p>MMT reference system plan</p> <ul style="list-style-type: none"> <li>• 38 MMT Conforming Portfolio: Portfolio that achieves the City’s proportional share of a 38 MMT statewide GHG target <ul style="list-style-type: none"> <li>○ The 38 MMT Conforming Portfolio assumed the use of RPS resources currently reflected in the City’s supply portfolio, as further described in other submittals to the Commission and this RPS Procurement Plan, as well as the following new RPS resources, which were deemed necessary to achieve pertinent emission parameters associated with the 38 MMT Conforming Portfolio. In aggregate, these new RPS resource would include: 15 MW of new solar; and 13 MW of new wind</li> <li>○ Future contracts with the following additional existing RPS resources were also deemed necessary to meet pertinent emission parameters associated with the 38 MMT Conforming Portfolio. In aggregate, these existing RPS resource would include: 1 MW biomass; 5 MW small hydro; and 15 MW wind</li> <li>○ The City’s 38 MMT portfolio conformed to the procurement timing, resource quantities, and general resource attributes identified in the 38 MMT reference system plan</li> </ul> </li> </ul> <p>Description of 2022 Preferred Conforming Portfolios:</p> <ul style="list-style-type: none"> <li>• 38 MMT in 2030 and 30 MMT in 2035 Conforming Portfolio <ul style="list-style-type: none"> <li>○ This is a continuance of the 38 MMT portfolio from the 2020 IRP. It is anticipated at this time that the contracts outlined above will continue to be sufficient</li> </ul> </li> <li>• 30 MMT in 2030 and 25 MMT in 2035</li> </ul>
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		<p>Conforming Portfolio:</p> <ul style="list-style-type: none"> <li>○ The City is only beginning to determine how it plans on meeting this new, lower GHG requirement. The City anticipates that the procurement required will be similar to the outlines discussed above to meet the 38 MMT portfolio from the 2020 IRP.</li> </ul> <p>Meeting the Mid-Term Reliability obligations from D.21-06-035:</p> <ul style="list-style-type: none"> <li>• The City is participating in the Joint CalChoice, Desert Community Energy Authority, and Clean Energy Alliance Mid-Term Reliability Request for Proposals. Currently, negotiations are ongoing with short-listed resources.</li> </ul>
<b>IV. Action Plan</b> <b>A. Proposed Activities</b>	Retail sellers should describe how they propose to use RPS resources to implement both Conforming Portfolios. Narratives should include:	
	1. <i>Proposed RPS procurement activities as required by Commission decision or mandated procurement.</i>  2. <i>Procurement plans, potential barriers, and resource viability for each new RPS resource identified.</i>	<p>To ensure compliance with its GHG and RPS targets, the City plans to substantially rely on GHG-free and RPS-eligible resources while contributing to statewide reliability requirements and responsibly managing overall portfolio costs. This approach is generally consistent between the 46 MMT Conforming Portfolio and 38 MMT Conforming Portfolio in the 2020 IRP Plan, as well as the 30 MMT and 25 MMT portfolios required to be included in the 2022 IRP Plan.</p> <p>The City’s compliance with the IRP incremental procurement obligation required by D.19-11-016 will be met through existing contracts, as further detailed in the City’s IRP. The contracted set of resources totals 6.2 MW, which exceeds the City’s 4.8 MW incremental capacity requirement, and certain portions are already online with the required balance of such incremental capacity expected to be online by the noted August 1<sup>st</sup> deadlines in 2021, 2022 and 2023.</p> <p>As discussed above, the City’s compliance with the Mid-term Reliability decision required procurement is on-going. The City’s total requirements from the</p>

		<p>decision are 18 MW, including 1.5 MW of Long Lead Time resources, and 4 MW of zero-emitting capacity by 2025.</p> <p>The City expects that additional renewable energy resources will be needed to align actual and IRP-related procurement and fulfill general RPS procurement obligations of the City, including requisite long-term RPS contracting requirements. The City will participate in additional RPS solicitation activities, as administered by CalChoice, to address the balance of its RPS and IRP-related resource needs. Such solicitations are ongoing and will occur as-needed, based on the City's evolving open positions. The City will keep the Commission apprised regarding such procurement activities and will update future RPS and IRP planning documents in consideration of related resource acquisitions.</p> <p>In consideration of the City's relatively small sales volume and related resource needs, there are no eminent barriers or concerns regarding resource viability that are expected to compromise the City's achievement of RPS or emission-related compliance obligations.</p>
<b>IV. Action Plan</b> <b>B. Procurement Activities</b>	The retail seller should describe the solicitation strategies for the RPS resources that will be included in both Conforming Portfolios. This description should include:	
	<ol style="list-style-type: none"> <li><i>1. The type of solicitation.</i></li> <li><i>2. The timeline for each solicitation.</i></li> <li><i>3. Desired online dates.</i></li> <li><i>4. Other relevant procurement planning information, such as solicitation goals and objectives.</i></li> </ol>	<p>The City may participate in distinct solicitations for different products (for example: specific renewable energy products, generating resources or storage infrastructure), or it may choose to solicit multiple products in the same solicitation. These solicitations will be competitive and may be similar to the City's previous long-term RPS solicitations, which were described elsewhere in this RPS Procurement Plan.</p> <p>The City will administer future solicitations, as necessary, to promote consistency with the resource development plan identified in the IRP (for purposes of promoting achievement with state mandated RPS targets as well as the City's internal targets). As noted above, the City anticipates administering upcoming solicitation activities</p>

		<p>consistent with the process and timeline described above. The City is currently in the process of procuring resources that will meet the Mid-Term Reliability needs, with an additional goal of procuring additional RPS-eligible renewable energy that will further achievement of RPS compliance mandates, including applicable long-term contracting requirements</p> <p>During administration of future procurement processes, the City will utilize the evaluative and contract management processes (further described above in Section X and elsewhere in this Plan) to promote timely project completion and improve planning certainty.</p>
<b>IV. Action Plan</b> <b>C. Potential Barriers</b>	Retail sellers should provide a summary of the potential barriers to implementing both Conforming Portfolios as they relate to RPS resources. The section should include:	
	<p><i>1. Key market, regulatory, financial, or other resource viability barriers or risks associated with the RPS resources coming online in both retail sellers' Preferred Portfolios.</i></p> <p><i>2. Key risks associated with the potential retirement of existing RPS resources on which the retail seller intends to rely in the future.</i></p>	<p>The City does not expect any procurement barriers to impede its future contracting for new or existing renewable energy resources, but notes that even though a balanced, diverse RPS portfolio is desirable, the limited resource availability and lead time required for some technology types may necessitate planning flexibility. The key risk affecting the City's achievement of the 46 MMT and 38 MMT Preferred Conforming IRP Portfolios in the 2020 IRP Plan and the 30 MMT and 25 MMT portfolios in the 2022 plan is reliance on new resources – while the City intends to contract with highly experienced and qualified project developers (when new-build resources are deemed necessary), there is always a limited risk of project failure.</p> <p>In consideration of the City's growing renewable energy commitments and the relatively manageable level of incremental RPS procurement that would be required to meet parameters of the Preferred Conforming IRP Portfolios, it does not have any substantive concerns regarding its ability to fulfill achieve levels of renewable energy procurement that will be required to satisfy pertinent RPS mandates or IRP targets. If the City's impression happens to change over time, it will accordingly advise the Commission in a</p>

		subsequent update to this RPS planning process.
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Dated: June 30, 2022

Respectfully submitted,

/s/ Isaiah Hagerman

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# **Appendix A**

**Redlined Version of Draft 2022 RPS Plan**

**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to Continue  
Implementation and Administration, and Consider  
Further Development, of California Renewables  
Portfolio Standard Program.

Rulemaking 18-07-003

**~~FINAL DRAFT~~ ~~2021-2022~~ RENEWABLES PORTFOLIO STANDARD PROCUREMENT  
PLAN OF RANCHO MIRAGE ENERGY AUTHORITY**

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Dated: ~~June 30~~ ~~February 17~~, 2022

**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to Continue  
Implementation and Administration, and Consider  
Further Development, of California Renewables  
Portfolio Standard Program.

Rulemaking 18-07-003

**~~FINAL 2021~~DRAFT 2022 RENEWABLES PORTFOLIO STANDARD PROCUREMENT  
PLAN OF RANCHO MIRAGE ENERGY AUTHORITY**

In accordance with the California Public Utilities Commission’s (“Commission”) March 30, 2021 *Assigned Commissioner and Assigned Administrative Law Judges’ Ruling Identifying Issues and Schedule of Review for 2022 Renewables Portfolio Standard Procurement Plans and Denying Joint IOUs’ Motion to File Advice Letters for Market Offer Process (“ACR”), ~~2021 Renewables Portfolio Standard Procurement Plans (“ACR”) and the Decision on 2021 Renewables Portfolio Standard Procurement Plans, issued on January 18, 2022 (“D.22-01-004”)~~*, the City of Rancho Mirage, doing business as Rancho Mirage Energy Authority (“RMEA” or “the City”), hereby submits this ~~Final 2021~~Draft 2022 Renewables Portfolio Standard Procurement Plan (“RPS Procurement Plan”). As directed by the ACR, this RPS Procurement Plan includes responses for the issues expressed in sections ~~5.1-5.16~~6.1-6.16 of the ACR.

RMEA notes that certain issues and requests in these ACR sections apply to the other retail sellers (electrical corporations and electric service providers), and do not extend to Community Choice Aggregators (“CCAs”). RMEA is nevertheless voluntarily responding to these ACR sections in the interest of transparency and to collaborate with the Commission. The submission of this RPS Procurement Plan pursuant to the ACR, however, should not be construed as a waiver of the right to assert that components of Senate Bill (“SB”) 350 or Commission decisions

and rulings on RPS Procurement Plan submittals, do not extend to CCAs, and RMEA reserves the right to challenge any such assertion of jurisdiction over these matters.

As indicated in RMEA's previously submitted RPS Procurement Plans, the Commission should consider the relatively small size and related administrative structure under which RMEA operates its CCA program. In particular, RMEA operates its CCA program under a shared service model, which means RMEA has joined together with other, regionally located CCA programs to promote administrative efficiencies by outsourcing many highly specialized services typically required for successful CCA administration and operation. The California Choice Energy Authority, or CalChoice, is a joint powers authority ("JPA"), the members of which include the cities of Lancaster and San Jacinto. CalChoice was formed to help cities in Southern California Edison's ("SCE") service territory evaluate, implement, and operate CCA enterprises without having to share or cede (by virtue of proportionate influence during decision making processes) control that could result from participation in larger, multi-jurisdictional JPAs or without independently taking on the significant financial liabilities (*e.g.*, start-up costs, staffing, and ongoing administration) of a single entity CCA. CalChoice is the organization selected by RMEA to provide requisite services and inter-agency coordination amongst regionally located, single-city CCA programs.

There are currently ten (10) Southern California communities that are being supported under independent administrative services agreements with CalChoice, including RMEA. These communities include the Town of Apple Valley ([doing business as Apple Valley Choice Energy, or "AVCE"; successful CCA launch in April 2017](#)); and the cities of Baldwin Park ([formerly doing business as Baldwin Park Resident Owned Utility District, or "BPROUD," which successfully commenced CCA service in October 2020, then later decided to terminate program](#)

operations through an orderly process that resulted in the return of its customers to SCE in March 2022), LCE (successful CCA launch in May 2015), Palmdale (doing business as Energy for Palmdale's Independent Choice, or "EPIC"; CCA launch is planned for October 2022), Pico Rivera (doing business as Pico Rivera Innovative Municipal Energy, or "PRIME," which successfully commenced the delivery of CCA service in September 2017), Pomona (doing business as Pomona Clean Energy; successful launch in October 2020), Rancho Mirage (doing business as the Rancho Mirage Energy Authority; successful CCA launch in May 2018), San Jacinto (doing business as San Jacinto Power; successful CCA launch in April 2018) and Santa Barbara (doing business as Santa Barbara Clean Energy; successful CCA launch in October 2021). CalChoice's team of experienced CCA practitioners works in cooperation with City and Town leadership to administer CCA operations. Responsibilities for CCA program management are divided, but closely coordinated, amongst these constituents. For example, CalChoice's team ~~AVCE; successful CCA launch in April 2017); and the cities of Baldwin Park (successful launch in October 2020, however it has announced in October 2021 that it will end its CCA and return customers to SCE in February 2022), Commerce (launch expected in 2023), Lancaster Choice Energy (successful CCA launch in May 2015), Palmdale (is planned for October 2022), Pico Rivera (successful CCA launch in September 2017), Pomona (successful launch in October 2020), Rancho Mirage (successful CCA launch in May 2018), San Jacinto (successful CCA launch in April 2018) and Santa Barbara (successful CCA launch in October 2021). CalChoice's team of experienced CCA practitioners, which helped launch Baldwin Park Resident Owned Utility District ("BPROUD", which serves the City of Baldwin Park), Lancaster Choice Energy, Pico Rivera Innovative Municipal Energy ("PRIME", which serves the City of Pico Rivera), Pomona Choice Energy (which serves the City of Pomona), the Rancho Mirage~~

~~Energy Authority (which serves the City), and San Jacinto Power (which serves the City of San Jacinto)~~, provides key administrative support and advisory services, including the completion of work related to resource planning and procurement (e.g., load forecasting, solicitation administration, contract negotiation support and, specifically related to this RPS Procurement Plan, the administration of functions required to plan for and procure requisite RPS-eligible renewable energy supply). City and Town staff, including elected leadership, take lead roles in reviewing and approving electric generation rates, adopting resource planning policies and creating, implementing and administering locally focused energy programs and, in certain cases, locally situated energy infrastructure projects that support CCA program operations and the interests of participating customers.

The CalChoice service model has not only proven to be highly desirable for many smaller Southern California communities but also critically important in preserving the community-specific oversight and decision-making autonomy that would not necessarily be afforded under a larger, multi-party joint powers agency. Key decisions of each CalChoice-supported community, including rate setting, retail supply portfolio composition, disposition of financial reserves, and administration of complementary programs, are independently addressed by the respective governing councils of each community and administered by staff with supporting input from CalChoice's experienced team. The CalChoice model preserves the autonomy of each participating community by applying a "one size does not fit all" support framework, which allows participating communities to establish and pursue objectives and key parameters that are directly responsive to the unique constituents and interests within their respective communities.

In terms of CalChoice's role in supporting the renewable energy planning and procurement functions of each participating community, CalChoice coordinates directly with

each community to identify required levels of renewable energy procurement (as specified under California’s RPS Program) as well as any above-RPS procurement targets voluntarily adopted by each participating community ([that may be related to specific retail service offerings that provide renewable energy deliveries in excess of statewide mandates](#)~~that may be related to the availability of specific retail service offerings, which provide proportionate renewable energy deliveries in excess of statewide mandates~~). Once such targets are established, CalChoice supports discussions focused on future renewable energy planning trajectories, recommended planning reserve margins, necessary long-term contracting requirements, upcoming solicitation administration, and ongoing monitoring of supplier/developer performance to promote alignment between actual and projected renewable energy supply, including the completion of any portfolio balancing activities that may be necessary to close incremental open positions or dispose of unnecessary excess/length. Such discussions between CalChoice and participating communities remain ongoing with opportunities to adjust desired renewable energy parameters over time. The information provided by participating communities is compiled by CalChoice and aggregated, if/when appropriate, to facilitate administratively coordinated procurement efforts. Due to the relatively small size of CalChoice’s participating communities, meaningful administrative efficiencies have been achieved through joint solicitation administration. In particular, otherwise redundant costs and procedural elements, including solicitation administration, counterparty coordination, contract negotiations, and project development milestone tracking, are substantially minimized by coordinating/centralizing such functions/roles through CalChoice. These ~~highly~~ desirable outcomes are critically important to CalChoice’s participating communities by reducing administrative complexities and staffing requirements that would otherwise need to be addressed by each participating community while simultaneously reducing costs that would

otherwise burden the financial performance of each CCA program – such an approach allows participating communities to leverage the relatively limited specialized expertise and technical acumen that are needed to successfully administer CCA enterprises without having to independently identify and hire such staff, which could be time consuming and very costly.

Subject to pertinent renewable energy mandates imposed under California’s RPS Program, participation in CalChoice’s renewable energy procurement processes (meaning solicitations and related contracting efforts) is voluntary, and member communities may independently determine whether or not to participate based on the status of each community in progressing towards such statewide mandates and, if applicable, desired levels of renewable energy procurement in excess of ~~which may exceed~~ such mandates. CalChoice does not act on behalf of its participating communities without prior direction/authorization, and any contracting processes resulting from CalChoice-administered solicitation efforts are subject to approval by the governing councils of participating communities (or predetermined, explicitly identified delegated authorities, which may allow senior city staff, such as a City Manager, to approve/execute certain contracts).

When contemplating resource planning and procurement efforts that will be undertaken by California retail sellers, including the preparation of requisite RPS Procurement Plans, RMEA encourages the Commission to consider the stark, undeniable differences between the relatively small communities supported by CalChoice and the state’s much larger Investor-Owned Utilities (“IOUs”). The disparate scope and magnitude of procurement responsibilities that must be undertaken by an IOU, relative to a small CCA, necessitate different approaches and organizational support. In the case of an IOU, there will be an entire procurement department available to support requisite efforts, including a team of attorneys, analysts, and other staff

members – the ~~level of magnitude of requisite~~ procurement activities undertaken by an IOU seems to necessitate such an approach. In the case of a small CCA, however, there may only be a few renewable energy supply contracts needed to satisfy pertinent procurement mandates at any point in time – in consideration of the work required to support such efforts, a small CCA would not necessarily want or need to hire several staff members, invest in costly systems or perform elaborate analyses. as the scope of responsibilities that must be undertaken to support RPS compliance activities is relatively narrow in comparison to an IOU. RMEA encourages the Commission to consider these differences when reviewing/evaluating the respective RPS Procurement Plans submitted by California retail sellers – differing levels of detail, procedure, complexity, and coordination are likely very appropriate within the planning documents submitted by small, medium, and large organizations; and where the Commission may be inclined to identify informational deficiencies in certain areas (based on inevitable differences between content provided in the RPS Procurement Plans of California’s IOUs and smaller CCA programs), RMEA encourages the Commission to consider the inappropriateness of a “one size fits most/all” approach in managing widely varying RPS planning and procurement obligations. While there may be some commonalities amongst planning and procurement practices reflected in the various RPS Procurement Plans submitted through this process, it seems reasonable to assume that noteworthy differences will be prevalent. This noted, the relatively close-knit community and ongoing coordination amongst CCA organizations (though associations like CalChoice and the California Community Choice Association, or “CalCCA”) has resulted in the sharing of many best practices, which may contribute to commonalities in various resource planning and procedural elements described in RPS procurement planning documents. The extent to which such commonalities exist may change over time, but the Commission should be

aware of the potential for similarities amongst the plans of CCA organizations, which regularly coordinate during the development of regulatory filings/submittals. In the case of this RPS procurement planning process, broad coordination has been particularly prevalent.

With regard to RMEA, its participation in CalChoice's shared service model will result in inevitable similarities when comparing the RPS Procurement Plans submitted by each participating community – due to the coordinated approach undertaken by CalChoice, key planning elements and procurement processes may, in fact, be identically described in each participant's respective RPS Procurement Plan. RMEA respectfully requests that the Commission consider this inevitability while reviewing its RPS Procurement Plan – the similarities between planning documents submitted by CalChoice's participating communities are reflective of thoughtful coordination, a commitment to fulfilling applicable compliance mandates reflected in California's RPS Program, an interest in promoting administrative efficiency, and an effort to suppress planning and procurement costs that would be much higher if each participating community independently managed such efforts. To the extent that CalChoice remains successful in promoting inter-agency coordination and efficiencies, participating customers are expected to benefit via retail rates that pass through the benefits of such efforts.

The Commission is also encouraged to consider the differing operational stages of reporting load serving entities ("LSEs"). Certain direction and guidance provided by the Commission seems to suggest that each element of the RPS planning process should be universally applicable across all LSEs, regardless of pertinent operational status, and that is not the case. For example, it is likely inappropriate and unhelpful for a newer CCA organization to prepare a ten-year negative price forecast or curtailment analysis when the nature of existing

contractual commitments would render such information irrelevant and unhelpful – given the heightened attention and related information focused on changing market conditions, increased incidents of negative pricing and related energy curtailment, all LSEs are aware, to some extent, of these potential risk factors, but that does not mean a related forecasting effort or other form of analysis would provide useful information to each LSE. For example, a generalized ten-year negative price forecast or curtailment analysis would have little meaning for a new LSE without existing contractual commitments or if its contractual commitments did not expose the buyer to negative price risk (due to the application of settlement mechanisms or the specification of fixed delivery quantities). Similarly, it would not make sense for an LSE to prepare forward curtailment estimates if its renewable contract portfolio primarily included fixed volume supply commitments or did not allow discretionary curtailment via terms and conditions reflected in such contracts~~did not include agreements allowing discretionary curtailment~~. Again, RMEA encourages the Commission to consider the appropriateness of universally requiring certain information within this planning process when such information may not be relevant or useful to the reporting entity (or other parties that may choose to review such information) – certain sections of these plans should be marked as “if necessary” or “if applicable” without the assumption that all LSEs should be comprehensively responsive in addressing such topics; RMEA further encourages the Commission to consider this approach in future rulings/directives related to this RPS procurement planning process.

With regard to understanding the consequences of compliance shortfalls, the communities supported by CalChoice have been advised of both direct (*e.g.*, financial penalties and findings of non-compliance) and indirect (*e.g.*, reputational damage that might accrue to participating communities or CCA organizations, generally) impacts associated with such

deficiencies and have chosen to pursue risk mitigation measures that are considerate of each participating community's aversion to such risks as well as the related administrative complexity, cost and rigor that were deemed appropriate to achieve the desired level of mitigation. CalChoice members have also been advised of, and clearly understand, the financial penalty mechanisms in place under California's RPS program – while it seems unlikely that a compliance shortfall will occur, there is an appreciation of prospective financial consequences, namely the \$50 per megawatt hour penalty applying to such shortfalls. This noted, RMEA observes that the RPS Program does not require a “compliance at any cost” approach, as the financial penalty structure is intended to address such issues [in the unlikely event that they occur.](#)

[In considering its evolving informational needs, the City has engaged CalChoice to prepare a more robust risk assessment, as reflected in this RPS Procurement Plan. Details related to this risk assessment are further described below and focus on the City's current portfolio of RPS supply agreements, evaluating potential portfolio impacts related to lower-than-expected deliveries and contract failure/termination amongst other considerations. In reviewing its analysis, the City feels confident that its MMoP, as further described herein, and general RPS procurement strategy will satisfactorily address applicable compliance mandates throughout the planning period.](#):-

~~To date, the completion of elaborate risk analyses and/or costly studies have not been considered necessary or desirable by participating communities, but if CalChoice happens to receive differing guidance (in the future), it will act in accordance with direction provided by the communities it supports. For now, the participating communities, including RMEA, have elected to pursue relatively modest renewable energy reserve margins, opting for contract structures that minimize the risk of delivery shortfalls by providing the buyer(s) with financial~~

~~protections which generally offset the impacts of financial penalties (prescribed under the RPS Program) in the event of non- or under-delivery.~~

Again, the relatively small communities and related renewable energy procurement efforts supported by CalChoice are not comparable to the geographic footprint and/or procurement efforts undertaken by the incumbent utility, SCE; individual communities supported by CalChoice tend to have near-term annual renewable energy procurement targets ranging from 50-300 gigawatt hours, while SCE is expected to procure several thousand gigawatt hours to meet its respective obligations. The significance of these differences and the complexity of related procurement efforts, including the myriad contracts typically required by larger entities, necessitate a much different scope of procedural considerations and risk mitigation measures – the RPS Procurement Plans submitted by the IOUs should not be the standard by which all other Plans are measured.

### **I. Major Changes to RPS Plan**

This Section describes the most significant changes between RMEA’s Final ~~2020-2021~~ RPS Procurement Plan and its ~~Final-2021~~Draft 2022 RPS Procurement Plan. A redline of this ~~Final-2021~~Draft 2022 RPS Plan against RMEA’s ~~Draft-Final~~ 2021 RPS Plan is included as Appendix A. The table below provides a list of key differences between the ~~2020-2021~~ and ~~2021-2022~~ RPS Procurement Plans:

Plan Reference	Plan Section	Summary/Justification of Change
<u>2022</u> <del>2021</del> -RPS Procurement Plan: Section II	Executive Summary	Updated to reflect the changes made throughout other sections of this RPS Plan.
<del>2021-RPS-Procurement Plan:-</del> Section III	<del>Summary of Legislation-Compliance</del>	<del>Updated to describe the process for taking-official positions on legislation.</del>

<a href="#">2022</a> <del>2021</del> RPS Procurement Plan: Section IV	Portfolio Optimization	<a href="#">Updated to describe Voluntary Allocation Market Offer proposal/framework approved in Decision 21-05-030 and subsequent decisions and resolutions, and potential RPS planning implications. Updated to describe procurement undertaken to comply with D.21-06-035, the Mid-Term Procurement Decision.</a> <del>Updated to acknowledge the May-20, 2021 adoption of Decision 21-05-030, which implements the Voluntary Allocation Market Offer proposal/framework, and potential RPS planning implications. Updated to acknowledge the June 24, 2021 adoption of D.21-06-035, the Mid-Term Procurement Decision.</del>
<a href="#">2022 RPS Procurement Plan: Section IV.B.1</a>	<a href="#">Long-term Procurement</a>	<a href="#">Updated long-term RPS procurement discussion.</a>
<del>2021 RPS Procurement Plan: Section IV.B</del>	<del>Responsive to Local and Regional Policies</del>	<del>Updated to describe impacts of local and regional policies on procurement targets, bid solicitation protocols, and forecasted supply.</del>
<a href="#">2022</a> <del>2021</del> RPS Procurement Plan: Section V	Project Development Status Update	Updated Appendix D to reflect the progress of new-build renewable generating projects.
<a href="#">2022 RPS Procurement Plan: Section VI</a>	<a href="#">Potential Compliance Delays</a>	<a href="#">Updated narrative to incorporate changing renewable energy procurement marketplace.</a>
<a href="#">2022</a> <del>2021</del> RPS Procurement Plan: Section VII	Risk Assessment	<a href="#">Added new risk assessment.</a> <del>Added narrative addressing system reliability and lessons learned.</del>
<a href="#">2022</a> <del>2021</del> RPS Procurement Plan: Section VIII	Renewable Net Short Calculation	Updated Appendix C to reflect ongoing procurement efforts.
<del>2021 RPS Procurement Plan: Section XIII</del>	<del>Curtailment Frequency, Forecasting, Costs</del>	<del>Expanded on existing discussion to include an updated curtailment assessment related to LCE's (another CCA supported by CalChoice), ongoing experiences with the Western Antelope Dry Ranch photovoltaic solar facility. Such assessment is considered by RMEA and other CalChoice members</del>

		<del>when evaluating prospective curtailment impacts related to renewable generator operation.</del>
<a href="#">2022</a> <del>2021</del> RPS Procurement Plan: Section XIV	Cost Quantification	Updated Appendix E to reflect ongoing procurement efforts.

## II. Executive Summary

RMEA is a CCA organization serving residential and business customers located within the City of Rancho Mirage. RMEA initiated customer service in May 2018 and currently serves approximately 15,000 retail electric accounts, which are expected to consume about 288 gigawatt hours per year. To streamline CCA program administration and create procedural efficiencies through jointly administered planning and procurement functions, RMEA continues to engage CalChoice for requisite planning and procurement support. RMEA regularly participates in jointly administered solicitations for long-term RPS-eligible renewable energy supply and other products, as administered by CalChoice. In fact, CalChoice, in combination with Desert Community Energy Authority and Clean Energy Alliance, recently administered a request for proposals for resources to meet the CCAs' needs under D.21-06-035, the decision requiring procurement to address mid-term reliability for 2023-2026, and potentially long-term RPS needs. Responses were due February 4, 2022 and CalChoice is currently in the process of negotiating with shortlisted respondents. Irrespective of the outcomes related to these negotiating efforts, the City's most recent contractual commitments are~~In fact, CalChoice recently administered a solicitation for RPS-eligible renewable energy; responses were due on June 11, 2021. Unfortunately, no RPS transactions resulted from the solicitation. However, RMEA executed an additional long-term PCC1 supply agreement with a New Mexico-based wind resource (Duran Mesa, LLC) on April 21, 2021—initial project deliveries will commence in~~

~~2022, providing RMEA with approximately 8,000 MWh/year of incremental PCC1 volume during the fifteen-year contract term. RMEA also executed a long-term PCC1 supply agreement with Powerex Corp., which will result in the delivery of 5,000 MWh per year over a ten-year period beginning in 2021. Coupled with RMEA's previously executed renewable energy supply contracts, this recent commitment is~~ expected to address the balance of RMEA's long-term RPS need in Compliance Period 4. In addition to various long-term supply agreements, RMEA has also executed certain short-term RPS supply commitments to address near-term RPS compliance mandates and related planning reserves. RMEA anticipates participating in various other solicitation efforts (administered by CalChoice and, possibly, the IOUs) as well as the Voluntary Allocation and Market Offer ("VAMO") process) to address remaining RPS open positions (both short- and long-term, as appropriate) and the increasing renewable procurement targets reflected in California's RPS Program. The City's specific plans related to VAMO are currently being evaluated, and while the City is unprepared to provide guidance regarding such plans at this point in time, it will reflect the expected planning impacts of its decision in a future update to this Plan.

RMEA's RPS open positions remain subject to periodic evaluation – such evaluations will generally occur: 1) prior to solicitation administration (for purposes of quantifying renewable energy volumes to be addressed in the upcoming solicitation); 2) after bid receipt (to determine potential impacts to RMEA's RPS open position); 3) after execution of any RPS contract (to quantify expected reductions to the open position associated with successful procurement activities); and 4) throughout each operating year as the relationship between actual and expected renewable energy deliveries is periodically monitored relative to retail electricity sales (to determine if additional procurement or surplus sales may be necessary to promote

portfolio balance). This process will remain ongoing and will be utilized to guide RMEA participation in future renewable energy procurement processes. Based on the results of this recurring ~~exercise~~<sup>process</sup>, RMEA may: 1) evaluate the need to adjust renewable energy planning reserves; 2) consider the manner in which project development and performance risk will be assessed and incorporated during RMEA's renewable energy procurement efforts; and 3) assess various other considerations related to the RPS Program as further described in this RPS Procurement Plan.

~~Based on currently anticipated RPS open positions, RMEA participated in a recent long-term RPS solicitation, which was administered by CalChoice. After finalization of renewable energy open positions, inclusive of RMEA's specified minimum margin of over procurement, the solicitation was held in the second quarter of 2021, with bid receipts due on June 11, 2021. After examining the bids and further discussions, however, no RPS deals resulted from this solicitation. Based on RMEA's ongoing success in fulfilling projected long-term open positions in Compliance Period 4, it may not pursue further long-term supply agreements at this time.~~

Since submittal of its Final 2021<sup>10</sup> RPS Procurement Plan, which occurred on February 17<sup>9</sup>, 2022<sup>1</sup>, RMEA continues to successfully operate its CCA Program. Amongst its key operational concerns, RMEA, via services provided by CalChoice, engages in requisite planning and procurement efforts to ensure compliance with California's RPS procurement mandate. Similar to other CalChoice members, RMEA has access to various resources and advisory services as well as a community of member organizations, which are able to create efficiencies through the administration of joint procurement processes and other inter-agency coordination. Going forward, joint procurement efforts, including participation in various CalChoice renewable energy RFPs, will enhance RMEA's ability to efficiently and cost effectively identify

and procure necessary renewable energy supply. RMEA also believes that this sort of joint procurement activity will provide access to larger, lower-priced procurement opportunities that would otherwise be unavailable to its individual CCA Program (due to sizing limitations), resulting in reduced overall renewable energy costs for its customers as well as general improvements in procedural efficiency.

City staff, in cooperation with CalChoice and its advisors, continue to evaluate the appropriateness of a 2% minimum margin of procurement [\(or “MMoP”, which in the City’s case is ~~not~~ determined](#) (relative to total expected annual retail sales) for requisite renewable energy supply. Analysis of the amounts of wind and solar curtailments in the CAISO over the 2018-2021 period show that curtailments were well below 1% of total load, and under 5% of the total renewable generation related to these specific technology types. [Further, a risk analysis conducted by RMEA confirms that the 2% MMoP is expected to be sufficient.](#) Ongoing discussions and analyses suggest that such a margin would provide adequate “cushion” in meeting applicable compliance mandates. In the future, if actual renewable energy deliveries are expected to fall short of projections, RMEA will consider adjusting the noted planning reserve. This approach seems to effectively balance RMEA’s interest in fulfilling pertinent RPS compliance obligations without subjecting the City’s CCA Program or its customers to unnecessarily high incremental renewable energy costs that would likely accrue in parallel with higher planning reserve targets. Before making any future adjustments (increases) to its anticipated renewable energy planning reserve, RMEA will also monitor [the local and national economic situation](#)~~local economic recovery related to the pandemic~~, including any potential issues related to business closures, the recovery/collection of customer payments and other concerns [that could arise as the federal government continues to manage inflationary pressures](#)

[by increasing interest rates.](#)

Over time, following the accumulation of additional financial reserves, the City will be better prepared to exhibit increased flexibility if larger renewable planning reserves are deemed necessary. With regard to the City's noted 2% renewable reserve margin, which is synonymous with the term "margin of procurement", the following methodology would apply: if expected retail sales total approximately 28~~28~~<sup>28</sup> GWh in 2021, RMEA would plan to procure an additional ~~65.8~~<sup>65.8</sup> GWh of renewable energy (2% of the estimated ~~288-282~~<sup>288-282</sup> GWh retail sales forecast; this quantity of renewable energy would be in excess of the anticipated interim annual procurement target related to California's RPS) to protect against renewable energy delivery shortfalls in this year. Relating such a margin of over procurement to the ~~near-36~~<sup>38.5</sup>% interim annual procurement mandate in 202~~21~~<sup>21</sup>, this would provide the City with a 5.~~26~~<sup>26</sup>% cushion (relative to the prevailing interim annual procurement target in this year) in the event that actual deliveries fell below expectations (relative to the expected 10~~93~~<sup>93</sup> GWh of renewable energy that would be required to meet the State's interim annual procurement mandate). During RMEA's ongoing discussions with CalChoice on this topic, it has been determined that such a margin could be periodically evaluated and adjusted on an as-needed basis in consideration of the manner in which actual renewable energy purchases/deliveries track with related projections and applicable statewide mandates, renewable product availability, budgetary impacts, customer participation rates (in RMEA's CCA program) and various other considerations.

Looking ahead to the balance of 202~~21~~<sup>21</sup> and beyond, the City and CalChoice are committed to administering renewable energy solicitations on an as-needed basis to ensure that both short- and long-term renewable energy requirements are satisfied. In considering its long-term renewable energy procurement obligations, the City acknowledges that certain new-build

contracting opportunities, which typically require long-term purchase commitments, may ~~need~~[require](#) substantial lead time before related renewable energy production occurs – ensuring that renewable energy deliveries associated with such projects dovetail with the City’s [mandated RPS purchase](#)~~anticipated needs~~ will require careful planning, selection of proven project developers and thoughtful consideration of ongoing renewable planning reserves to promote alignment of actual and projected renewable energy needs. [For the time being, however, all of the City’s RPS supply commitments are with generating facilities that have already achieved commercial operation.](#) Given the success of its ongoing renewable energy procurement efforts, the City is confident in its ability to identify sufficient levels of renewable energy supply and will work diligently to secure such supply during ongoing operations, [including the consideration of short- and long-term RPS volumes available via VAMO.](#) The City does not take for granted that proposed RPS procurement/project opportunities will result in finalized/executed contractual commitments. With this in mind, RMEA is prepared to exhibit flexibility in administering future RPS solicitations and will continue to engage the market until contractual commitments closely align with or exceed anticipated resource needs.

As part of its ongoing planning process, RMEA is also considering the manner in which renewable energy compliance risks will be assessed and managed. RMEA [has further considered this topic after submitting its Final 2021 RPS Procurement Plan and determined that an enhanced risk analysis would be instructive in assessing the sufficiency of its MMoP and other variables that could impact planned renewable energy deliveries. The results of this analysis are presented below, including a description of the methodology that was applied in completing such analysis. Based on the results of its analysis and previous guidance from CalChoice, the identification and selection of highly experienced and financially viable](#)

renewable energy sellers remains the single most important consideration in promoting the achievement of RPS compliance – by pursuing supply commitments from such sellers, including the specification of contract terms that narrow compliance risk (through firm, fixed delivery quantities or relatively high energy delivery guarantees, ~~continues to discuss this topic with CalChoice, which continues to manage such risk through the screening and evaluative processes associated with its renewable energy solicitations. In particular, a key element of proposal evaluation focuses on the identification and selection of highly experienced and financially viable renewable energy sellers—by pursuing supply commitments from such sellers,~~ RMEA and CalChoice believe that the substantial majority of future delivery risk can be avoided. This will be accomplished by completing a rigorous review of each prospective supplier's development and operational experience, track record of success (in terms of developing and/or operating renewable energy projects), financial standing and credit rating, familiarity with pertinent development milestones as well as the state of completion for such items, customer references and various other considerations. During completion of this process, the field of respondents will be significantly narrowed, leaving only the best qualified suppliers to undergo further consideration. ~~The results of this ongoing process have led CalChoice, in cooperation with the City, to determine that a quantitative risk assessment has not been necessary thus far. In the future, however, evolving market conditions, supplier interest and/or other circumstances may prompt RMEA and CalChoice to determine that completion of quantitative risk assessments will be necessary and appropriate, depending upon the renewable energy procurement opportunities that happen to be pursued.~~

This Draft RPS Procurement Plan also addresses new requirements specified in the April 11, 2022 ACR, including updates that reflect an extended planning period, through 2032, as well

as recently completed risk assessment; the Draft Plan was also updated to some preliminary information regarding the City's intent to participate in the VAMO process~~This RPS-Procurement Plan also addresses new requirements specified in the March 30, 2021 ACR, including a discussion related to the City's process for taking official positions on legislation as well as commentary focused on the impacts of local and regional policies related to the City's procurement targets, bid solicitation protocols, and forecasted supply.~~

### **III. Summary of Legislation Compliance**

This ~~Final 2021~~ RPS Procurement Plan addresses the requirements of all relevant legislation and the Commission's regulatory framework. This Section describes the relevant statutory and regulatory requirements and how this RPS Procurement Plan demonstrates that RMEA meets these requirements.

SB 350 was signed by the Governor on October 7, 2015. SB 350 set a new RPS procurement target of 50 percent by December 31, 2030. On December 20, 2016, the Commission issued Decision ("D.") 16-12-040, which partially implemented the increased targets of SB 350 by establishing new compliance periods and procurement quantity requirements. On July 5, 2017, the Commission issued D.17-06-026, which implemented some of the key remaining elements of SB 350, including adopting new minimum procurement requirements for long-term contracts and owned resources, as well as revising the excess procurement rules.

SB 100 was signed by the Governor on September 10, 2018 and became effective on January 1, 2019. SB 100 increased the RPS procurement requirements to 44 percent by December 31, 2024, 52 percent by December 31, 2027, and 60 percent by December 31, 2030. On June 6, 2018, the Commission issued D.18-05-026, which implemented changes made

by SB 350 to the RPS waiver process and reaffirmed the existing RPS penalty scheme. In July of 2018, the Commission instituted Rulemaking 18-07-003 to continue the implementation of the RPS. On June 28, 2019, the Commission issued D.19-06-023, which continues to use a straight-line method to calculate compliance period procurement quantity requirements.

The current RPS procurement targets are incorporated into RMEA's Renewable Net Short Calculation Table as described in Section VIII below and attached as Appendix C. RMEA's current and planned procurement, as reflected in RMEA's Renewable Net Short Calculation Table and described in Sections IV and V, is expected to be sufficient to exceed these targets, including a minimum margin of over-procurement based on RMEA's perception of reasonably foreseeable risks, as further described in Sections VII and IX. RMEA is also positioned to meet the SB 350 long-term procurement requirement, as described in Sections V and VII.

SB 901, signed by Governor Brown on September 21, 2018, added Public Utilities Code section 8388, which requires any IOU, publicly owned electric utility, or CCA with a biomass contract meeting certain requirements to seek to amend the contract to extend the expiration date to be five years later than the expiration date that was operative as of 2018. RMEA does not have a contract with a biomass facility that is covered by Public Utilities Code section 8388.

As a public agency, the City takes official support positions on legislation through a formal vote of its governing council. Information on the City's official support positions, including a support letter, if applicable, will be made available as part of the agenda packet related to the Council Meeting at which such vote occurs. The City may also post a press release regarding official positions on major legislation to the City's website. Because the City only

takes support positions through the formal actions of its governing council, it cannot identify any future legislative efforts that it may support.

~~Further, the City is a member of CalCCA, which regularly takes formal support positions on legislation. However, a support position of CalCCA does not necessarily reflect the uniform support of every member of CalCCA, and thus should not be imputed to the individual members of CalCCA.~~

#### **IV. Assessment of RPS Portfolio Supplies and Demand**

##### **IV.A. Portfolio Supply and Demand**

As previously noted, RMEA began serving customers in May 2018. RMEA currently provides retail electric generation service to approximately 15,000 retail electric accounts, which are expected to consume about 288 gigawatt hours per year. To date, RMEA, via solicitations administered by CalChoice, has entered into several power supply agreements (both short- and long-term) with various suppliers, certain of which will contribute to RMEA's RPS compliance during early-stage and ongoing CCA operation. ~~CalChoice recently administered a solicitation for RPS-eligible renewable energy; responses were due on June 11, 2021 and responses are currently undergoing evaluation. Any contracts resulting from this solicitation process would be additive to existing supply commitments addressed by the City in previous RPS planning documents. In addition to the noted solicitation, RMEA executed an additional long-term PCC1 supply agreement with a New Mexico-based wind resource on April 21, 2021—initial project deliveries are expected to commence in 2022, providing RMEA with approximately 8,000 MWh/year of incremental PCC1 volume during the fifteen-year contract term. RMEA is also in late-stage negotiations with an experienced supplier of long-term PCC1 products and expects to finalize such negotiations (and execute a related supply agreement) around the time that this Final 2021 RPS Procurement Plan is submitted. This recently executed~~

~~agreement will augment RMEA's existing long-term supply commitments, facilitating compliance with California's 65% requirement (which became effective in 2021).~~ RMEA

expects that further solicitations will be necessary over time, as additional supply commitments will be required to fulfill the City's growing renewable energy requirements that are expected to increase in concert with California's escalating RPS mandate. Such solicitation processes will be focused on both short-term and long-term renewable energy needs and will be administered on an as-needed basis, following RMEA's periodic evaluation of expected renewable energy deliveries relative to projections.

The exact portfolio characteristics selected may vary depending on direction received from the City's Governing Council, advice provided by CalChoice, renewable resource availability, procurement costs, legislative and policy changes, technological improvements, preferences of the community, or other developments, such as the procurement ordered in Mid-Term Reliability decision, D.21-06-035. To manage this future uncertainty, RMEA and CalChoice examine and estimate supply and customer demand and will structure future procurement efforts to balance customer demand with requisite resource commitments. This examination of customer demand and other market developments will help reduce costs and assist in meeting expected renewable energy requirements for the period addressed in this ~~Final-2021~~ RPS Procurement Plan.

RMEA is also attempting to gain an improved understanding of the prospective impacts to its customer base associated with the potential ~~upcoming~~ reopening of California's direct access market due to SB 237 (2018) and D.19-05-043. In D.21-06-033, ~~The City is aware of D.21-06-033, in which~~ the Commission recommended against expanding direct access at this point, however, t ~~The City recognizes that this may change in the future. The City and~~ will

monitor direct access for any changes that may result in future adjustments to RMEA's load forecast and related renewable energy procurement obligations, which would be expected to decrease if RMEA loads migrates to direct access providers – in theory, such a change would push RMEA's renewable energy content higher unless surplus supply was sold to other market participants; [this would be similar to the impacts experienced by California's IOUs, which have resulted from ongoing CCA implementations and expansions – following these activities, the proportionate RPS content of each IOU has increased, as evidenced in the annual Power Source Disclosure Report of each IOU \(for reference, this has occurred in spite of IOU-administered solicitations intended to sell off surplus RPS supply, which suggests that other retail sellers, particularly CCAs, have already made meaningful progress in meeting applicable RPS mandates in the near-term planning horizon\)](#). To the extent that any adjustments are made to the City's retail sales forecast, it will reflect such adjustments in a subsequent RPS Procurement Plan. Through the ongoing evaluation of customer demand and other market developments, RMEA hopes to influence reduced overall costs while meeting planned procurement objectives for the period addressed in this ~~Final 2021~~ RPS Procurement Plan.

Also, as COVID-19 cases [generally decline and mobility restrictions continue to relax, the City will continue to monitor retail sales in the event that any meaningful deviations from historical norms happen to surface. The City will also monitor any changes that might arise from ongoing inflationary pressures and the implementation of higher interest rates that are being applied by the federal government to manage such inflation. Much like load-related impacts throughout the pandemic, the City understands that customer energy use within California's current period of economic uncertainty \(meaning, the "high inflation, rising interest rate" environment being experienced throughout the country\) and the post-pandemic recovery](#)

period may be difficult to predict and easily obscured by typical variations in weather.

Nonetheless, the ~~continue to decline and mobility restrictions relax, the City will closely monitor California’s planned mid-June “reopening” to determine the extent and pace at which retail electricity sales may return to historical norms. Much like load-related impacts throughout the pandemic, the City understands that customer energy use during California’s reopening and general economic recovery will be difficult to predict—while nominal increases seem inevitable, such changes could be easily obscured by typical variations in weather. The~~ City will closely evaluate available data, attempting to parse various impacts on retail electricity consumption while incorporating adjustments to its planning assumptions on an as-needed basis. Regardless of any near-term load volatility, the City remains confident that its internally adopted MMoP~~Minimum Margin of Procurement~~, when applied to its renewable energy targets, will virtually eliminate the potential for compliance deficits.

#### **IV.A.1. Voluntary Allocation and Market Offer (VAMO)**

The Final Report of Working Group 3 Co-Chairs: Southern California Edison Company (U-338E) California Community Choice Association, and Commercial Energy (“Final Report”) was filed on February 21, 2020, in the Commission’s PCIA rulemaking (R.17-06-026). One of the Final Report’s key proposals was for the Commission to create a VAMO framework, where each LSE serving customers subject to the PCIA would be provided an annual option to receive an allocation (“Voluntary Allocation”) from the IOUs’ PCIA-eligible RPS energy portfolios, based on that LSE’s forecasted, vintaged, load share, and subject to certain conditions. Further, the Final Report proposed that any declined shares would be offered to LSEs through a market process (“Market Offer”). On May 20, 2021, the Commission adopted D.21-05-030, addressing the proposals in the Final Report. D.21-05-030 adopted the Final Report’s VAMO proposal, subject to certain limitations and additional requirements. LSEs will also be able to acquire

resources through the VAMO structure that will be considered long-term contract resources.

The Commission recently approved D.22-06-024, which provided additional guidance on the VAMO process, as well as Resolution No. E-5216, which approved the IOUs' pro forma contracts for the voluntary allocations. The IOUs have also filed advice letters outlining their market offer processes for resources not allocated through the voluntary allocations; approval for these processes is expected later this year.

The process for voluntary allocations is currently ongoing and is expected to be concluded in July 2022. RMEA is currently evaluating its needs, as well as available VAMO allocations for both long-term and short-term RPS energy and expects to finalize its choices in July 2022. At this time, the City is only prepared to indicate that it expects to accept certain quantities available via VAMO, but the extent to which available allocations will be accepted remains uncertain. As such, RMEA plans to file an update in August 2022, informing the Commission on the results of its participation in the VAMO process.

#### **IV.A.21. Portfolio Optimization**

The City's goal is to meet its locally adopted policies and statewide mandates in a manner that is both cost effective and supportive of a well-balanced resource portfolio. Portfolio optimization strategies can help reduce costs and should facilitate alignment of the City's resource portfolio with forecasted energy requirements of its CCA customers. In order to support this goal, the City regularly considers the following strategies:

**Joint Solicitations:** Joint solicitations can expand the procurement opportunities available to a CCA, as well as potentially provide better contract terms. The City participated in the recent CalChoice, Desert Community Energy Authority and Clean Energy Alliance solicitation for Mid-Term Reliability (MTR) resources and - ~~administered solicitation for~~ long-term renewable energy supply and intends to continue participating in such joint solicitation activities as part of the shared services arrangement that it has in place with CalChoice. The City is also evaluating and participating in joint solicitations through CalChoice with other CCAs.

**Purchases from Retail Sellers:** Purchases of RPS-eligible renewable energy (via resale) from other retail sellers can provide a cost-effective way of meeting short term resource needs or filling in gaps in procurement while long term projects are under development. The City will evaluate solicitations offered by other retail sellers, as necessary.

**Sales Solicitations:** Based on its portfolio rebalancing needs, the City will also consider administering RPS sales solicitations (with the City serving as seller) to other market participants.

**Optimizing Existing Procurement:** As the City considers its long-term resource needs, it may evaluate options in its future power purchase agreements, if available, to increase output of existing generating facilities through technological upgrades or by adding new capacity to an existing generator. Expanding existing facilities or adding energy storage infrastructure at existing generating facilities may provide additional generation at reduced costs and/or increased operational flexibility with a lower risks of project failure (because the need for distribution system upgrades and permitting may be reduced) – such opportunities may be pursued, as deemed appropriate by the City.

~~The Final Report of Working Group 3 Co-Chairs: Southern California Edison Company (U-338E) California Community Choice Association, and Commercial Energy (“Final Report”) was filed on February 21, 2020, in the Commission’s PCIA rulemaking (R.17-06-026). One of the Final Report’s key proposals was for the Commission to create a “Voluntary Allocation Market Offer” (“VAMO”) framework, where each LSE serving customers subject to the PCIA would be provided an annual option to receive an allocation (“Voluntary Allocation”) from the IOUs’ PCIA-eligible RPS energy portfolios, based on that LSE’s forecasted, vintaged, load share, and subject to certain conditions. Further, the Final Report proposed that any declined shares would be offered to LSEs through a market process (“Market Offer”). On May 20, 2021, the Commission adopted D.21-05-030, addressing the proposals in the Final Report. D.21-05-030 adopted the Final Report’s VAMO proposal, subject to certain limitations and additional requirements. To implement this modified VAMO structure, D.21-05-030 identifies various next steps, including a meet and confer process with the IOUs regarding the method for calculating potential Voluntary Allocations based on vintaged, annual load forecasts and a method for~~

~~dividing the IOU's RPS portfolios into shares. LSEs may also be able to acquire resources through the VAMO structure that will be considered long-term contract resources. As currently scheduled, SCE will hold its voluntary enrollment period for VAMO resources during May 2022. At this early stage, the City is preliminarily reviewing its portfolio to determine whether and to what extent any Voluntary Allocation of RPS energy, both short-term and long-term allocations, or participation in IOU Market Offers would benefit its position. The City will provide an update on this topic in its next RPS Procurement Plan.~~

On June, 24 2021, the Commission adopted D.21-06-035, which directed all retail sellers to procure 11,500 MW of new net qualifying capacity ("NQC") between 2023 and 2026 and assigned each retail seller a specific procurement responsibility based on its share of peak demand. The City's total obligation is 18 MW, which must include minimum amounts of procurement from certain subcategories: (1) 4 MW from firm, zero-emitting capacity by 2025; (2) 1.5 MW from long duration storage resources by 2026; and (3) 1.5 MW from firm, non-fossil fueled baseload generating resources by 2026. The City is currently evaluating a range of procurement options for meeting its D.21-06-035 obligations. [This procurement was addressed through the request for proposals conducted jointly by CalChoice, Desert Community Energy Authority, and Clean Energy Alliance described elsewhere in this RPS Procurement Plan.](#)

Options to be considered range from RA-only contracts to renewable generation, including that paired with storage and stand-alone storage contracts with various different energy structures. While RPS-eligible generation would provide an added benefit, it is not the primary objective or deciding factor in determining which procurement options will ultimately be selected. If the City does meet any of its D.21-06-035 procurement obligations with renewable generation, then that generation may be in addition to the planning and forecasting described in this RPS Procurement

Plan. The City will try to optimize its RPS procurement with the requirements from D.21-06-035 and will hopefully be able to harmonize these procurements to reduce costs, improve resource dispatchability (to better align renewable resource delivery profiles to the City's load profile) and avoid any need to over-procure resources.

#### **IV.B. Responsiveness to Local and Regional Policies**

##### **(i) Responsiveness to Policies of RMEA's Governing Council**

RMEA is a local governmental agency that is subject to the control of the City's Governing Council and is directly accountable to the community that it serves. RMEA generally supports and is committed to meeting the state's GHG reduction and renewable procurement goals. Furthermore, and as noted elsewhere in this RPS Procurement Plan, the City has adopted near-term renewable portfolio targets that closely align with RPS mandates. As a result, the City's supply portfolio will be structured to achieve and sustain RPS compliance at the lowest possible cost (which is a key objective of the City's CCA program).

##### **(ii) Responsiveness to Regional Policies**

As noted in the previous sub-section, the City is overseen by its governing council, which also serves as the governing board/authority for its CCA program. As such, the policies adopted by the City's governing council (related to CCA operations) serve as guiding directives for CCA operations, including the determination of renewable energy planning targets that are intended to support local policy preferences.

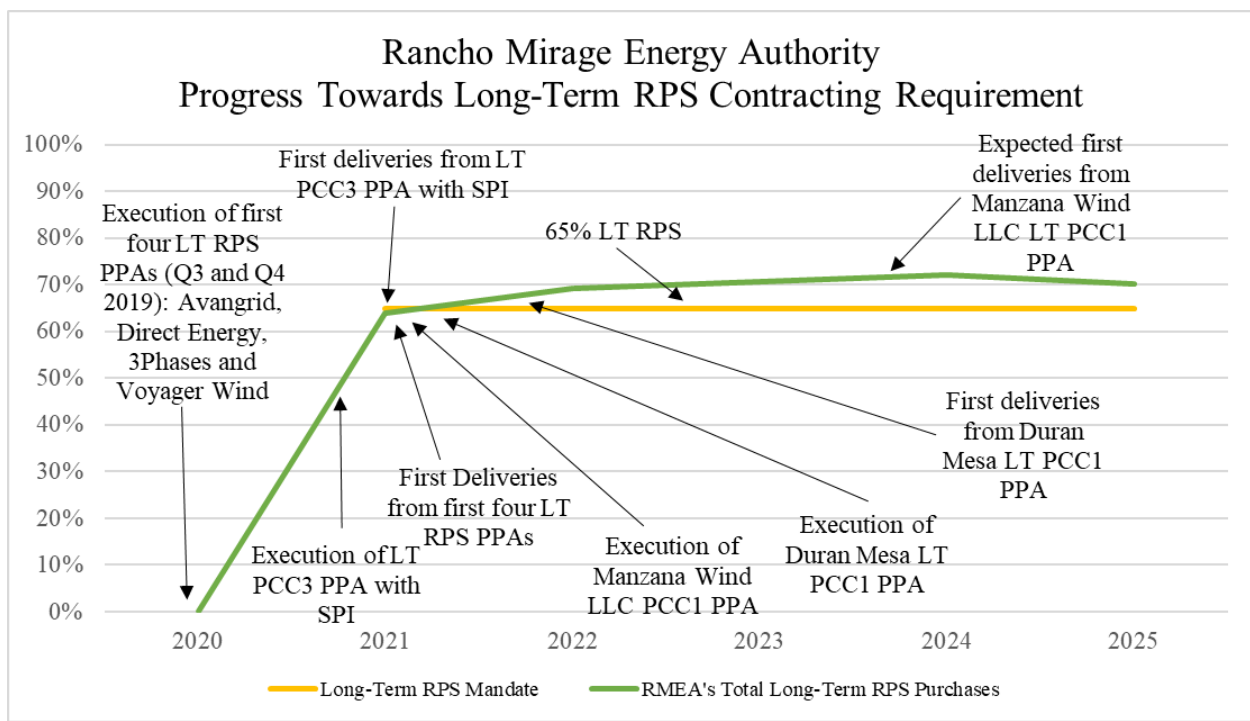
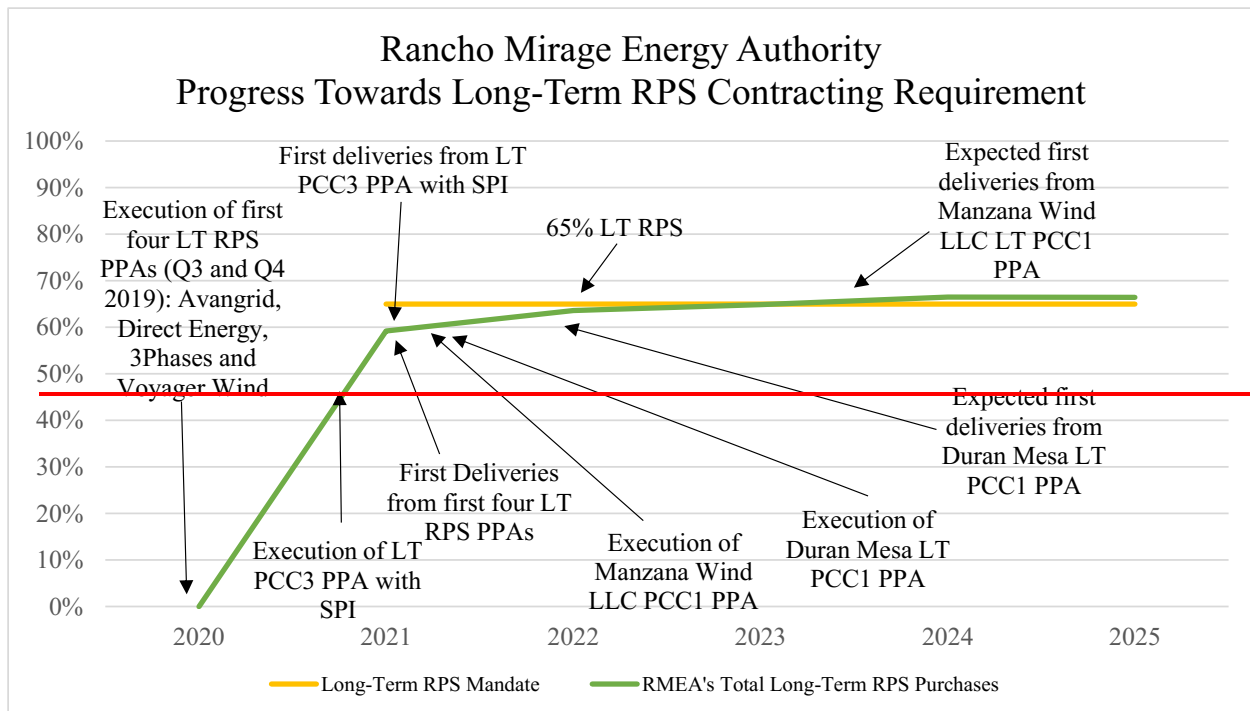
#### **IV.B.1. Long-term Procurement**

Pursuant to Public Utilities Code section 399.13(b), from 2021 onwards, 65 percent of mandated renewable energy purchases must be sourced from contracts of 10 years or more. The City has been conscientiously planning and procuring to meet this requirement and is making

good progress in this regard. Based on existing long-term supply commitments, the City expects to achieve compliance with the long-term contracting requirement in the current compliance period, Compliance Period 4 (2021-2024). Additional long-term contracting efforts will be pursued to support RMEA's ongoing RPS compliance in Compliance Period 5 and 6.

Regarding recent additions to the City's long-term RPS supply portfolio, RMEA executed an additional long-term PCC1 supply agreement with a New Mexico-based wind resource on April 21, 2021 – initial project deliveries [commenced in December 2021 and will provide](#)~~are expected to commence in 2022, providing~~ RMEA with approximately 8,000 MWh/year of incremental PCC1 volume during the fifteen-year contract term. RMEA is also in late-stage negotiations with an experienced supplier of long-term PCC1 products and expects to finalize such negotiations (and execute a related supply agreement) around the time that this ~~Final 2021~~ RPS Procurement Plan is submitted – RMEA looks forward to updating the Commission regarding the successful execution of this agreement and its impact on the organization's resource planning efforts in a future RPS Procurement Plan.

The following chart reflects the City's current and anticipated progress in meeting California's long-term RPS contracting mandate in Compliance Period 4 and beyond. [Note that this chart does not include the City's anticipated VAMO elections, which could meaningfully increase its long-term RPS positions beyond those reflected below.](#) The City notes that existing long-term contracts, including the recently executed addition to its long-term RPS supply portfolio, are expected to fulfill its long-term contracting requirements in CP4, plus a reasonable reserve. Should any delivery delays occur, the City will pursue other long-term contracting opportunities and will advise the Commission of such procurement activities.



As previously noted, RMEA has made considerable progress in addressing outstanding long-term RPS open positions. The City expects to regularly engage in jointly administered long-term renewable solicitations via its association with CalChoice and anticipates the

execution of additional RPS supply agreements over time. In particular, LCE is participating in a joint CalChoice, Desert Community Energy Authority and Clean Energy Alliance Mid-Term Reliability Request for Proposals, which was released in January 2022. Responses were returned on February 4, 2022, and RMEA, along with CalChoice, is currently negotiating with shortlisted respondents. Projects are expected to be online to meet the various deadlines in D.21-06-035 between 2023 and 2025. ~~multiple supply agreements during the first four to five years of program operations. This approach should facilitate the City's achievement of pertinent long-term contracting requirements reflected in the RPS Program. A prospective schedule of procurement activities, which remains subject to change, that will be necessary to promote ongoing compliance with California's RPS Program, including requisite long-term contracting requirements is as follows: (1) Q1 2021 (COMPLETE)—finalization of renewable energy open positions, inclusive of RMEA's specified minimum margin of over procurement; (2) Early Q2 2021 (COMPLETE)—finalization of solicitation requirements and schedule, inclusive of any resource-related specifications, supplier qualifications and evaluation criteria; (3) Late Q2 (COMPLETE)—release of long-term renewable energy solicitation, receipt of responses, evaluation of responses and short-list selection; (4) Late Q2 2021 (IN PROCESS)—bid receipt (on June 11, 2021), identification of preferred supplier(s) and commencement of contracting efforts; (5) Q3 2021—finalization of contracting efforts; and (6) Q4 2021 and beyond—commencement of initial deliveries under executed renewable supply contract(s).~~ Based on RMEA's ongoing success in fulfilling projected long-term open positions in Compliance Period 4, its current long-term RPS needs are very small. To address such needs, it may accept long-term allocations available through VAMO and/or engage in other procurement processes to address future open positions for long-term RPS supply. ~~—may not pursue further long-term~~

~~supply agreements at this time.~~ RMEA understands that fulfilling upcoming long-term contracting requirements (in 2025 and beyond) may be somewhat iterative and dependent upon the acceptance of available VAMO allocations as well as any offers that may be received through future solicitation processes (and related contracting successes). In the event that the City enters into another contract with a new-build renewable generating facility, it will closely monitor project development progress and contract/project performance to ensure that actual long-term deliveries meet or exceed pertinent requirements. Any future long-term contracting efforts, including the acceptance of any long-term VAMO allocations, will be described in subsequent RPS Procurement Plans.~~offers received during each successive solicitation process and related contracting success. RMEA is committed to fulfilling such long term contracting requirements and will administer solicitations accordingly until this obligation is satisfied. Thereafter, the City will closely monitor project development progress (for new build renewable projects) and contract/project performance to ensure that actual long term deliveries meet or exceed pertinent requirements. Further progress will be described in subsequent RPS Procurement Plans.~~

#### **IV.C. Portfolio Diversity and Reliability**

RMEA has considered and will continue to ~~will also~~ consider the deliverability characteristics of its current and future generating resources placed under contract (such as the resource's dispatchability, available capacity, and typical production patterns) and will review the respective risks associated with short- and long-term purchases as part of its forecasting and procurement processes. These efforts will lead to a more diverse resource mix, address grid integration issues, and provide value to the local community. The City may also consider renewable energy plus storage options and stand-alone storage options, subject to availability and

cost, which would allow RMEA to better align/dispatch available energy supply in consideration of customer usage patterns – such resource types may be eventually included in LCE’s supply portfolio as a result of its participation in the joint solicitation with CalChoice, Desert Community Energy Authority, and Clean Energy Alliance as described elsewhere in the RPS Plan. Solicitations of this sort, both current and future, should help ~~previous and subsequent solicitations have permitted such offers, and RMEA will continue including these options in future solicitation activities in an effort to~~ alleviate grid impacts that could otherwise result from increased buildout of certain resources that may contribute to conditions of over-generation. A quantitative description of this forecast is attached to this ~~Final 2021~~ RPS Procurement Plan in Appendix C.

While the City is not opposed to considering emerging renewable generating technologies, it is unlikely that upcoming supply agreement(s) will focus on such resources – the City has yet to receive credible and cost-competitive proposals from emerging renewable generating technologies, but if such proposals arrive in the future, they will be closely considered alongside other viable options. Based on the City’s renewable energy planning goals and intended reserve margins, its renewable supply commitments must result in reliable, cost-effective supply to promote compliance with applicable RPS mandates without bearing the risks typically associated with newer technologies. Until compelling proposals for emerging renewable generating technologies are received ~~For the foreseeable future,~~ the City will likely exhibit preferences for “tried and true” generating technologies, including energy storage options, that will minimize delivery risk during ongoing operation while allowing for re-shaping of certain renewable generating profiles to better align supply with demand. ~~If, however, a compelling offer is presented for a cost-effective emerging technology, the City will evaluate such proposal on its merits relative to other available offers.~~

The City will procure renewable and other energy products, as necessary, to ensure that the future energy needs of its customers are met in a [manner that promotes reliability and cost-effectiveness](#)~~reliable and cost-effective manner~~, consistent with applicable compliance mandates and general objectives of the CCA Program. The City has established procurement targets for renewable energy supply, including subcategories for various renewable energy products, and has also established targets for related planning reserves as described elsewhere in this document – currently applicable renewable energy procurement targets generally mirror RPS mandates, plus the noted two percent planning reserve. To the extent that the City’s energy needs are not fulfilled through the use of renewable generating resources, it should be assumed that such supply will be sourced from conventional energy resources, such as natural gas generating technologies or system power purchases, or other carbon-free generating technologies (specifically, hydroelectricity) that may be necessary to further progress in meeting California’s greenhouse gas emission reduction goals.

RMEA currently utilizes a portfolio risk management approach as part of the power purchasing program that is administered by CalChoice on its behalf, seeking low-cost supply (based on prevailing market conditions at the time of solicitation administration) as well as diversity amongst technologies, production profiles, project sizes and locations, counterparties, lengths of contract, and timing of market purchases. It is reasonable to assume that RMEA’s supply portfolio will increase in complexity over time, utilizing an increasing number of supply contracts and related supplier relationships by emphasizing the principles of resource and counterparty diversity.

A key component of RMEA’s planning process relates to the analysis and consideration of expected load obligations with the objective of closely balancing supply/demand, cost/rate

stability and overall budgetary impacts. RMEA and CalChoice actively monitor actual customer usage, relative to projections, refining such forecasts as well as the ability to minimize variances between procured energy quantities and actual usage – while this process may not eliminate such variances, it should significantly reduce them, minimizing exposure of the CCA Program and its customers to unexpected cost spikes that may occur within California’s power market. ~~This will be particularly challenging in the evolving environment created by the COVID-19 pandemic and prospective economic recovery related to California’s “reopening”.~~ Nonetheless, ~~t~~<sup>h</sup>e City is committed to developing an accurate understanding of the manner in which its customers use electric power to promote an efficient and cost-effective procurement process.

As part of developing an understanding of how its customers use electric power, the City ~~maintains is developing~~ load curves that reflect expected increases in load due to both transportation electrification and building electrification. Transportation electrification planning considers personal light duty vehicles, electrification of fleets and local targets for electrification of public transit systems. Contracting with a diverse set of renewable resources from different locations throughout California and the West will be necessary to accomplish the goal of aligning a renewable energy portfolio to LSE’s load curves.

With regard to the City’s anticipated renewable energy requirements, RMEA maintains portfolio coverage targets of up to 100 percent in the near-term (0 to 2 years) but leaves larger open positions in the mid- to long-term, consistent with generally accepted industry practices. This noted, RMEA is aware of the eminent long-term contracting requirement of 65% and ~~will~~ <sup>keeps</sup> this obligation in mind when addressing its longer-term portfolio coverage targets.

At this point in time, the City has no explicit preference for specific renewable generating technologies and considers all resource types with the goal of assembling a diversified, cost

effective renewable energy supply portfolio that will deliver energy in a profile that is generally consistent with the anticipated load shape of RMEA customers. RMEA is also aware that future reliance on intermittent renewable generating technologies has the potential to create occasional misalignments between customer energy consumption and power production as well as variances between the actual and expected quantity of renewable energy received from such projects. In order to better align the quantities of renewable energy with load, and help reduce variances between actual and expected quantities of renewable energy, the City is considering both stand-alone storage and hybrid or co-located storage and renewable energy projects. The City has also applied the previously described minimum ~~to protect against this uncertainty, RMEA has applied the previously described voluntary~~ margin of over procurement for renewable energy (set at 2% of retail sales). To the extent that significant, prolonged variances are observed between RMEA's actual and expected energy use, staff may propose increased planning reserves (beyond the current 2% of retail sales metric reflected herein).

#### **IV.D. Lessons Learned**

In communicating with and reviewing the RPS Procurement Plans of California's most mature CCA organizations as well as considering its own experiences in developing an RPS portfolio, the City observes that geographic diversity remains an important element in selecting renewable energy resources/contracting opportunities. The City observes, ~~the City observes that Marin Clean Energy ("MCE") has highlighted the benefits of geographic diversity in constructing a renewable supply portfolio. MCE noted~~ that certain areas of the state have been overbuilt with renewable generating infrastructure, which has created challenges related to depressed market prices and increasing levels of resource curtailment. The City has kept this observation in mind when assembling its own renewable resource portfolio, avoiding

overcommitment to resources within a narrowly defined geographic area. Based on communications with CalChoice and other CCAs, the City also continues to evaluate historical pricing trends, which have materially changed in the wake of increased renewable energy buildout. Due to these transitions and suppressed (and oftentimes negative) market pricing, the City will likely avoid contracting with generators located in certain areas or require substantial storage capacity (operated in parallel with renewable generating infrastructure) to mitigate market price risk when considering renewable generating resources located in such areas. The City appreciates the substantial financial risks that are created by California's long-term renewable contracting requirements and will continue to explore opportunities to manage such risks during its contracting efforts.

## **V. Project Development Status Update**

As described in Section IV.B above, RMEA's current and planned procurement is expected to be sufficient to meet applicable RPS procurement requirements while supporting the state's GHG reduction targets. Further, RMEA's current and planned procurement supports system reliability by considering both portfolio diversity and alignment with RMEA customers' load curve. Specifically, the RMEA's selected projects ~~that are currently under development~~ fit within and support RMEA's plans for meeting these goals.

RMEA's ongoing contracting efforts have resulted in supply commitments with new/repowered generating assets and related (updated) details are included in the Project Development Status Update Report, Appendix D.

RMEA is pleased to be able to inform the Commission that its projects under development have~~an additional project under development has~~ achieved commercial operation.As reported in its Final 2021 RPS Procurement Plan, the Duran Mesa wind project located in

Duran, NM commenced commercial operations in late 2021. [The two other projects, RMEA had under development are both operational; RMEA reported in its Final 2021 RPS Procurement Plan that ColGreen was operational and IP Athos achieved its commercial operations date on May 19, 2022](#)~~Of the two other projects shown in the Project Dev. Status Template, ColGreen is operating and IP Athos has a current expected COD of June 1, 2022.~~

Regarding RMEA's commitment to new-build renewable infrastructure, it has entered into three RPS supply agreements supporting new renewable infrastructure. As other favorable procurement opportunities are identified for new renewable generation, RMEA will thoroughly evaluate such opportunities against other available supply alternatives.

## **VI. Potential Compliance Delays**

RMEA does not anticipate any compliance delays for the current compliance period (Compliance Period 4, which includes calendar years 2021-2024). Ongoing contracting processes have resulted in the identification and execution of numerous renewable energy supply commitments, and RMEA's attention to annual balancing of requisite renewable energy purchases relative to retail sales is expected to put the CCA program in position where actual renewable energy deliveries closely align with (but slightly exceed) applicable compliance mandates [during the current compliance period](#). RMEA is also making good progress in meeting the state's 65% long-term contracting requirement. RMEA will continue assessing projected long-term open positions relative to expected deliveries and intends to participate in future CalChoice-administered solicitations, as necessary, to ensure compliance with this element of the RPS Program. [The City is also considering the extent to which it may accept long-term allocations available under the VAMO process, which would augment existing long-term RPS positions.](#)

As a small CCA, the City recognizes that its portfolio of resources will be more limited than larger LSEs and that delays in online dates and reduced generation from the RPS contracts may have significant impacts on both its level of RPS and its progress to achieving 65% from long term contracts. The City has discussed this topic with CalChoice, which continues to manage such risk through the screening and evaluative processes associated with its renewable energy solicitations. In particular, a key element of proposal evaluation focuses on the identification and selection of highly experienced and financially viable renewable energy sellers – by pursuing supply commitments from such sellers, the City and CalChoice believe that the substantial majority of future delivery risk is avoided. This will be accomplished by completing a rigorous review of each prospective supplier’s development and operational experience, track record of success (in terms of developing and/or operating renewable energy projects), financial standing and credit rating, familiarity with pertinent development milestones as well as the state of completion for such items, customer references and various other considerations. During the completion of this process, the field of respondents will be significantly narrowed, leaving only the best qualified suppliers to undergo further consideration. The results of this process have led CalChoice, in cooperation with the City, to determine that further quantitative risk assessments have not been necessary thus far. In the future however, based on evolving market conditions, supplier interest or other circumstances, the City and CalChoice could determine that completion of quantitative risk assessments may be necessary and appropriate, depending upon the renewable energy procurement opportunities that happen to be pursued.

If a future compliance issue is identified or RMEA encounters challenges in securing requisite renewable energy supply, then RMEA will address such issue(s) in a subsequent RPS Procurement Plan.

### ~~VI.1. Impacts of COVID-19 Pandemic~~

~~The City is keenly aware of the current, worldwide COVID-19 pandemic, and its impact on “business as usual”, including impacts to requisite resource planning activities and, in particular, renewable energy procurement.~~ As the Commission is aware, successful renewable energy markets depend upon international supply chains, substantial labor commitments, robust financial markets, timely interactions with governmental planning authorities and various other considerations. With numerous disruptions caused by the [COVID-19 pandemic and various other challenges](#)~~current pandemic~~, it is incredibly challenging to determine if, and to what extent, renewable energy procurement opportunities may be compromised, particularly new-build renewable energy projects which typically rely on long-term contracts as the basis for project financing. [The City will closely monitor energy usage patterns to determine if any planning adjustments may be necessary based on the current and expected economic conditions.](#)~~The City also understands that many CCAs, including the RMEA program and other operational CCAs supported by CalChoice, have observed moderate to significant net retail sales reductions resulting from the pandemic, but with California’s “reopening” scheduled to occur in mid-June, the City will closely monitor energy usage patterns to determine if any planning adjustments may be necessary—a certain level of economic recovery is expected to occur, but understanding upcoming changes will require diligent monitoring of available data. Businesses that previously closed may reopen and usage patterns may shift (away from the residential sector and towards the commercial sector, as businesses reopen and/or return to normal operations). The timing and extent of recovery is generally unknown and the subject of considerable speculation.~~

The City intends to closely monitor this situation as well as potential fallout related to supplier/developer effectiveness in fulfilling mandated renewable energy needs, project

completion and overall supplier viability – the City is aware that many supply chains have been disrupted during the pandemic with a variety of material/component shortages occurring throughout the industry; recent concerns regarding the application of tariffs on certain imported renewable infrastructure have also provoked certain supplier to request “reopening” of previously executed contracts and/or the negotiation of terms that allow for price adjustments in the event of unexpected costs (such as the noted tariff). While the tariff issue seems to be temporarily resolved, concerns of this nature have introduced a measure of instability in the long-term contracting efforts of many retail sellers. With these concerns in mind, ~~It seems reasonable to anticipate consequences, and~~ the City encourages the Commission to closely monitor and potentially reconsider certain elements of the RPS Program as this situation evolves, particularly if there are widespread, well-documented challenges as California retail sellers attempt to fulfill pertinent procurement requirements. Related, the City is aware of numerous instances in which contract documents are being drafted with more expansive force majeure language to alleviate the concerns of sellers/developers in meeting project completion schedules due to potential pandemic-related delays – “day for day” commercial operation date extensions have been pursued, creating flexibility in achieving commercial operation date targets based on the duration of shelter-in-place directives. From the City’s perspective, which is informed by guidance provided via CalChoice, buyers must be diligent in contracting efforts to strike an appropriate balance between flexibility and certainty – not all project development delays are expected to be directly attributable to the pandemic, so effectively parsing contractual accommodations (for development delays) in consideration of this reality should serve to manage uncertainties related to project completion and renewable delivery timelines.

The City also encourages the Commission to coordinate closely with the Legislature to

evaluate potential adaptations to the RPS Program, which may become necessary if renewable energy markets are materially impacted by the pandemic. With rapidly changing circumstances and related information, the City anticipates the need for considerable flexibility/agility in working to meet requisite renewable energy procurement mandates. In the meantime, the City will remain hopeful that impacts to renewable energy markets will not compromise California's ability to reach its renewable energy procurement goals or its own, internally established renewable procurement targets.

## **VII. Risk Assessment**

The City will make reasonable efforts to minimize the risk of renewable procurement shortfalls for purposes of complying with applicable RPS mandates established in SB 100, but it cannot definitively predict the scope or magnitude of circumstances that may impact annual retail energy sales, renewable energy markets or individual project performance. With this in mind, the City will responsibly assess RPS compliance risk by considering three key planning elements: 1) retail sales variability; 2) renewable energy production/delivery variability; and 3) impacts to overall system reliability associated with the City's planned RPS purchases and other influences. These topics will be generally considered in the noted sequence with observed risks informing potential adaptations to the City's planning process, potential adaptations to planning reserves and, ultimately, refinements to the City's renewable energy procurement (or sales) processes and quantities. As described elsewhere in this ~~Final 2021~~ RPS Procurement Plan and in consideration of City-adopted RPS planning targets, the City expects to be well-positioned to meet its RPS compliance requirements in Compliance Period 4 (and beyond). Therefore, the City's self-determined risk of non-compliance is low. Nevertheless, the City will continue to assess demand-side and supply-side risks to better understand potential areas of concern and to

promote achievement of organizational compliance objectives. If the City's self-determined risk of non-compliance happens to change in the future, it will accordingly advise the Commission of such assessment, related causes and anticipated remedial actions.

Regarding demand-side risk, the City continues to evaluate prospective retail sales during the 10-year planning period, including but not limited to new development projects (that could increase retail energy consumption) and business closures, expected customer attrition (or growth) and changes to behind-the-meter generating capacity. From a practical perspective, the greatest demand-side risk with regard to the City's anticipated customer base is that retail sales are meaningfully higher than anticipated during Compliance Period 4. As the Commission is aware, CCAs provide an opportunity for customer choice, allowing customers to voluntarily participate in the City's program or remain bundled customers of the incumbent utility, SCE. To the extent that customers choose to leave the City's CCA program, or "opt out", the City's retail sales will decrease, resulting in related increases to the ratio of renewable energy serving such customers (and improving the City's position relative to applicable RPS compliance mandates-  
~~and voluntarily adopted planning goals, which meaningfully exceed applicable mandates~~) – it is unlikely that the City's renewable supply commitments will provide volumetric flexibility/options in the event of higher-than-anticipated retail sales volumes; in such instances, the City would need to pursue additional procurement opportunities to address unanticipated open positions. The CCA program has been operating since 2018, and its customer base appears to be relatively stable; barring any unforeseen circumstances, substantial year-over-year variations in retail sales are not expected to occur. Also, considering the City's ongoing coordination with its planning department, the City expects to be well informed regarding upcoming development projects or other customer changes that could materially increase retail

sales. For this reason, the City believes that demand-side RPS compliance risk is manageable.

Regarding supply-side risks, the City is aware of the generation variability/intermittency associated with certain renewable technologies as well as the possibility of curtailment (based on pricing considerations or market directives) during certain times of day/year – with regard to curtailment, the City has learned from the experiences of LCE, a fellow CalChoice member, but the supply-related impacts associated with such curtailment activities at the Western Antelope Dry Ranch photovoltaic generating facility (in Lancaster, California; this facility is under long-term contract with LCE) have been very low over the past three years; additional detail related to LCE’s experience with curtailment is provided below. In the case of new-build renewable projects, the City is also aware of the possibility of project delays and, potentially, project failure. Such circumstances can materially diminish renewable energy deliveries, jeopardizing the achievement of RPS compliance and exposing the CCA program to unexpected financial consequences, if such circumstances impact larger (or multiple) supply sources. Based on the City’s relatively modest RPS planning reserve, it will need to be highly selective in identifying its renewable energy suppliers, particularly those offering supply from new-build generating facilities, and will generally focus on organizations that have well-documented track records of successfully fulfilling RPS delivery obligations.

To the best of the City’s knowledge, few early-stage CCAs have experienced difficulties with generalized renewable energy procurement, but long-term RPS contracting has been more challenging – typical lead times (between contract execution and project completion) associated with new-build renewable energy projects are often 2-3 years or longer, and related power supply contracting efforts are rarely initiated so far in advance of service commencement. With this observation in mind, early-stage CCAs must either: 1) focus RPS contracting efforts on

existing renewable generating resources; or 2) accept failure/delay risks associated with new-build renewable projects placed under contract near the time of CCA launch by incorporating reasonable planning reserves to mitigate such risks. In the case of the City, a balanced approach has been ~~will be~~ pursued, which will focus on contracting efforts with both new and existing renewable generating resources, thereby minimizing, but not eliminating, risks associated with compliance shortfalls while promoting new renewable infrastructure buildout that will be required to meet California's increasing renewable procurement mandates. The City expects to pursue long-term RPS contracts that will yield delivery surpluses relative to applicable compliance mandates and such surpluses are expected to mitigate concerns related to project development delays and or failures during Compliance Period 4. ~~After such contracting efforts are complete, the City will incorporate the results of its contract-specific risk assessment by entering related volumetric risk adjustments within a future quantitative assessment (to be provided as part of the RPS planning process).~~

The City also anticipates mitigating supply-side risk by incorporating fixed-volume and index-plus pricing structures amongst its portfolio of RPS supply agreements. These procurement mechanisms serve to mitigate the risk of delivery variability (typically associated with intermittent renewable resources and/or renewable resources that may be subject to periodic curtailment) and exposure to negative market pricing (which could prompt economic curtailment). Fixed volume arrangements, in particular, also mitigate risk associated with commercial operation delays and facility failure; these structures also provide buyers with financial protections (via penalty payments) for under-delivery (which could be used, as a last resort, to offset compliance penalties in the event that the supplier or the City are unable to identify replacement volumes).

As part of the City's approach to managing supply-side risk (which will be carried out through its relationship with CalChoice), it has also adopted what it believes to be a CCA best practice related to RPS contracting: structuring solicitations to identify proven renewable generating technologies in RMEA resource locations to be developed and/or operated by the most experienced available suppliers (with strong, well-documented track records of successful project completion and operational reliability). Unlike certain of the IOU's early-stage contracting efforts, which focused on experimental/unproven renewable generating technologies, CCAs have generally focused early-stage contracting efforts on tried-and-true technologies and highly experienced counterparties – the City intends to follow this practice as well.

This noted, there is always a possibility that future renewable energy supply will not be delivered as required, which is why the City, based on discussions with CalChoice, has incorporated a 2% minimum margin of procurement in its renewable energy planning process. The 2% minimum margin of procurement, or “planning reserve”, has been~~was~~ determined to be sufficient, as discussed below, but this metric will undergo periodic review and, if necessary, revision during future planning discussions and in consideration of ongoing procurement efforts.

The City has compiled information about curtailments of renewable energy in CAISO over the last four years. This information is presented below. The data shows that renewable curtailment has been consistently under 1% of load. The City also analyzed the occurrence of negative prices within the SP-15 area of the CAISO. These studies, combined with the analysis of other risk discussed below, ~~which~~ indicates that the 2% minimum margin of procurement adopted by the City should be sufficient, allowing for additional variability in supply. These past results are obviously not indicative of what might occur in the future, and indeed the data shows that the trend of renewable curtailment has generally been increasing. However, the City has

considered recent and expected developments in energy markets and believes that increases in curtailments [and negative prices](#) should not continue growing as seen in the last few years. There are several reasons for this. First, the amount of storage available on the CAISO system, much of it tied directly to renewable resources, has grown dramatically over the last year and is expected to continue this explosive growth over the next few years. The growth of storage should provide a sink for large amounts of renewable energy that might today be curtailed, [especially since much of the storage is co-located with the renewable energy](#). Exports of energy from the CAISO during periods of low prices when renewable curtailment would likely occur have also been increasing as the rest of the west begins to recognize the benefits to using this cheap energy from California when it is available. In addition to storage and exports, expected increases in transportation and building electrification will likely increase demand and also provide a sink for the rapidly increasing amounts of renewable energy. The changes brought about by climate change may also reduce the curtailment of renewable resources. This can be seen in the reduction in curtailments that occurred in 2021 which was at least partially due to the reduction in hydro generation due to the ongoing drought. As temperatures in California increase it is expected that annual snowpacks will decrease reducing the amounts of hydro generation. Additionally, climate change is expected to increase the volatility of weather, likely leading to more years with low hydro generation in the future.

[The City has recently attempted to quantify the energy impacts of such supply side losses into three main categories: 1\) curtailment risk; 2\) counterparty risk; and 3\) project cancellation risk. These risks, as previously discussed, pose the greatest impacts to the delivery of RPS energy. In addition to the historical curtailment analyses already discussed \(and further elaborated on below\), the City has examined forwarding looking data concerning curtailment](#)

risk as the likelihood the market forward curves are below -\$15/MWh on an annual basis from the year 2022 to the end of the contract's life. Below this dollar amount, the City is likely better off financially curtailing the unit and purchasing additional renewable energy credits on the secondary market. The figures presented in the column quantifying curtailment risk are calculated by taking the energy delivered to market and multiplying it by the likelihood of curtailment. Counterparty risk is the risk posed by a counterparty being unable or unwilling to honor their total RPS delivery obligations, as reflected in related contract documents. The City quantifies this likelihood by considering S&P Global's, Global Corporate Annual Default Rates by Rating Category (%) as a measure of organizational viability and financial stability. While this rate considers industries beyond the energy sector, it provides solid insights into the correlation and potential impacts of dealing with uncreditworthy counterparties. The likelihood of default by credit rating was averaged over the years from 2014 to 2019. These years were chosen to remove irregularities in default rates during the COVID-19 pandemic. If a counterparty was found to be unrated, then the contract was reviewed to identify specified credit assurances; based on such assurances, an approximate rating was derived based on experience and risk tolerance. The final category reflected in the City's analysis is project/contract cancellation risk. This category is distinct from the counterparty risk category because the risk of project/contract cancellation may only affect a single project under a counterparty's portfolio. Projects may be cancelled for a variety of reasons, but in today's market economy, deals struck several months to a year ago may no longer be economic for the seller. It was assumed this risk only effects single source projects, which have yet to be constructed. These projects were chosen because they have a single point of failure unlike RPS energy purchased from a pool of resources (under a portfolio-style purchase agreement in which there is generally more diversity amongst the

sources of supply). Based on discussions with various counterparties and its industry knowledge, the City will assume this risk effects 1 in 20 deals. Considering these categories holistically, the City is able to derive a cumulative energy percentage at risk. To add to the City's conservative tolerance for risk, a top-level risk of non-delivery offset at 0.25% of renewable energy procurements will be added to the calculated energy at risk percentage. This adder will help to express risks the City cannot foresee and help to better guarantee full compliance through the assumption of lower than expected RPS deliveries (which will necessitate higher levels of RPS procurement, via renewable energy planning reserves). The percentage of renewable energy and error is the percentage of total renewable energy procured, while the percentage of retail load is the energy at risk as a percentage of retail load. These "at risk" percentages reflect possible losses which, through no fault of the City, may occur by virtue of being a market participant. These losses pose a risk for non-compliance relative to the City's RPS goals and targets. Since this number is not a guaranteed loss, the City will implement the previously mentioned mitigation strategies to give the greatest chance of full market delivery and compliance.

ID	Contract	RPS Contract ID	Energy	Delivery & Market Risks		
			Energy to be Delivered to Market (MWh)	Curtailment Risk (MWh)	Counterparty Risk (MWh)	Project Cancellation Risk (MWh)
1	Contract 1373	0	108,000	-	2,076	-
2	Contract 1379	0	283,500	-	5,449	-
3	Contract 1380	0	167,737	396	3,224	-
4	Contract 1691	0	445,375	1,053	8,560	-
5	Contract 1804	0	5,000	-	-	-
6	Contract 2102	0	52,920	-	1,017	-
7	Contract 2532	0	12,000	-	231	-
8	Contract 2687	0	310,260	-	5,963	-
9	Contract 2802	RMEA70019	464,100	-	8,920	-
10	Contract 2971	RMEA90020	13,000	-	-	-
12	Contract 3708	RMEA90028	60,000	-	1,153	-
<b>Total</b>			<b>1,921,893</b>	<b>1,449</b>	<b>36,593</b>	<b>-</b>

#### Energy

<b>Total Renewable Energy</b>	<b>1,921,893</b>
<b>Total Renewable Energy at Risk</b>	<b>38,042</b>
<b>Pct of Renewable Energy at Risk</b>	<b>1.98%</b>
<b>Pct of Unknown Error at Risk</b>	<b>0.25%</b>
<b>Pct of Renewable Energy &amp; Error at Risk</b>	<b>2.23%</b>
<b>Pct of Retail Load</b>	<b>1.27%</b>

[As previously mentioned, the City has also analyzed historical data on curtailments in the CAISO energy markets.](#)

In the CAISO energy markets, much of the curtailment of renewable resources is achieved through the market process because of renewable energy resources voluntarily submitting bids into the energy markets which cause them to shut down when market conditions create low energy prices. Because of this structure the curtailment data provided will also be indicative of when negative prices occur. The City recognizes this connection and thus the analysis above as to why curtailments are not expected to increase as they have over the past few years also informs expectations of negative prices. As explained elsewhere in this document, the City has taken steps through its contracting to reduce its risk exposure to low prices and

curtailment of renewable resources.

Annual Curtailments (MWh)			
		Wind	Solar
2018		28,686	432,357
2019		43,557	921,684
2020		90,276	1,497,220
2021		78,477	1,426,326
Annual Curtailment (% of specific generation)			
2018		0.17%	1.56%
2019		0.27%	3.22%
2020		0.56%	4.99%
2021		0.41%	4.19%
Annual Curtailment (% of Load)			
2018		0.013%	0.191%
2019		0.020%	0.420%
2020		0.041%	0.683%
2021		0.036%	0.647%

The City has also analyzed negative prices in the CAISO, as these can greatly affect the siting and operation of CCA owned and contracted assets. The City has endeavored to quantify the occurrence of such events to help limit their financial and regulatory impact. With limited means of forecasting such events, the City has assembled this additional historic analysis with the average results being used in the City's forecasting assumptions for curtailment events.

Below are several charts which illustrate the number of historic curtailment events. The City defines a curtailment event as the times the location marginal price (LMP) drops below negative \$15/MWh. It is assumed below this price it is financially prudent to curtail a renewable generators energy production and procure renewable energy credits (RECs) on the secondary market. Estimates for the real-time market (RTM) have been averaged over the hour, so only the average price is evaluated.

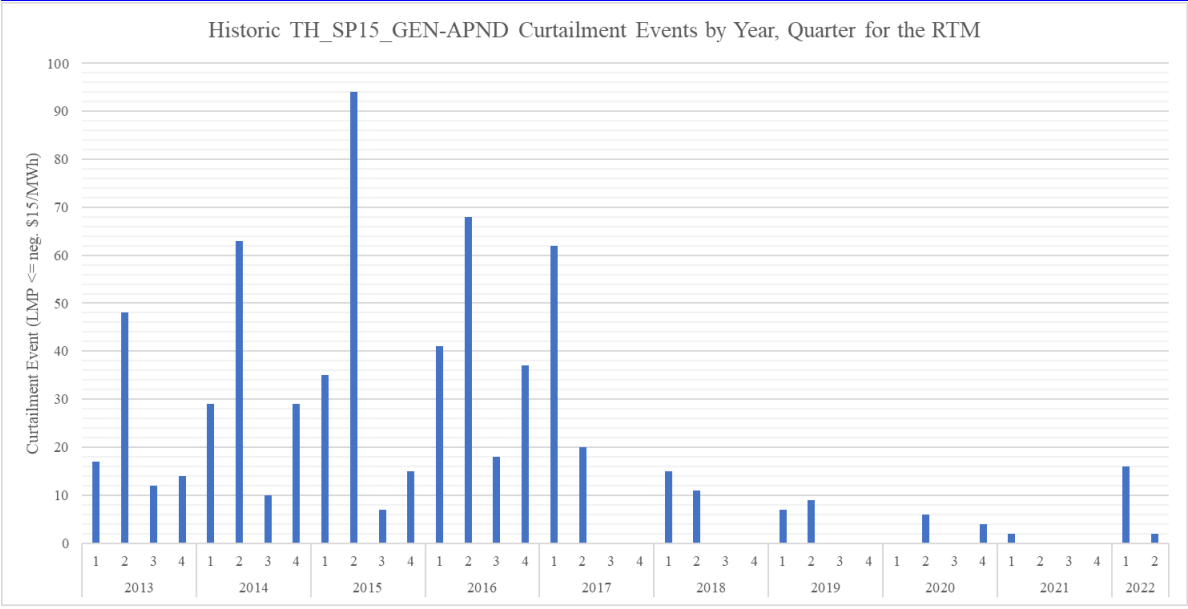
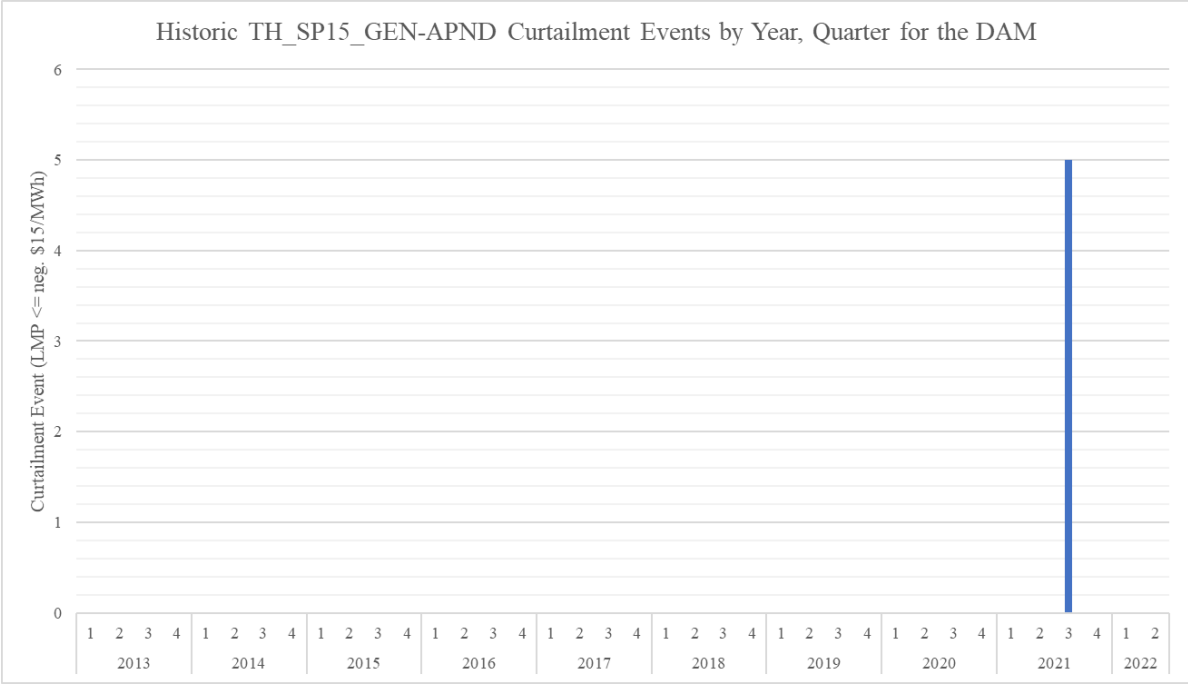


Table: SP15 DAM Curtailment Events by Year, Quarter, &amp; Hour

	2013				2014				2015				2016				2017				2018				2019				2020				2021				2022	
	Quarter				Quarter				Quarter				Quarter				Quarter				Quarter				Quarter				Quarter				Quarter				Quarter	
Hour	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Quarter	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0
Total Year	0				0				0				0				0				0				0				0				5				0	

Table: SP15 RTM Curtailment Events by Year, Quarter, &amp; Hour

	2013				2014				2015				2016				2017				2018				2019				2020				2021				2022		
	Quarter				Quarter				Quarter				Quarter				Quarter				Quarter				Quarter				Quarter				Quarter				Quarter		
Hour	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	
1	0	1	0	0	1	0	0	4	1	2	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2	0	4	1	1	1	2	1	3	1	0	0	3	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
3	0	9	4	3	3	7	0	3	4	3	0	0	1	2	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4	0	5	2	0	7	9	2	3	2	6	0	0	0	4	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5	2	7	1	1	1	4	1	2	1	1	1	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6	4	3	1	0	0	1	0	1	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7	2	2	1	0	0	4	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8	0	1	0	0	0	2	2	0	0	0	3	1	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
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10	0	6	1	2	3	7	1	1	2	8	3	3	2	9	5	6	10	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	
11	2	1	1	2	4	8	1	3	3	5	1	1	3	11	4	5	7	1	0	0	1	2	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0
12	1	0	0	1	2	3	0	4	2	6	0	2	4	3	2	10	5	2	0	0	1	0	0	0	1	1	0	0	0	1	0	1	0	0	0	0	0	1	1
13	0	1	0	1	2	1	0	2	2	4	0	2	4	3	1	3	2	1	0	0	1	1	0	0	1	1	0	0	0	0	1	0	1	0	0	0	0	3	0
14	1	0	0	1	2	1	0	0	2	6	0	1	4	6	1	6	5	2	0	0	2	0	0	0	4	1	0	0	0	1	0	1	1	0	0	0	3	1	
15	1	2	0	1	1	3	0	1	2	6	0	2	5	7	1	4	7	2	0	0	3	1	0	0	1	2	0	0	0	0	1	0	0	0	1	0	0	3	0
16	0	0	0	0	1	3	0	1	4	7	0	1	5	7	0	1	8	2	0	0	3	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	0	
17	0	0	0	0	1	2	0	0	1	9	0	0	4	3	0	0	2	2	0	0	4	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2	0	
18	0	0	0	0	0	1	0	0	0	7	7	0	2	1	0	0	2	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	
19	1	0	0	0	0	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
20	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
23	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
24	0	1	0	0	0	0	0	0	1	3	0	1	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Total Quarter	17	48	12	14	29	63	10	29	35	94	7	15	41	68	18	37	62	20	0	0	15	11	0	0	7	9	0	0	0	6	0	4	2	0	0	0	16	2	
Total Year	91				131				151				164				82				26				16				10				2				18		

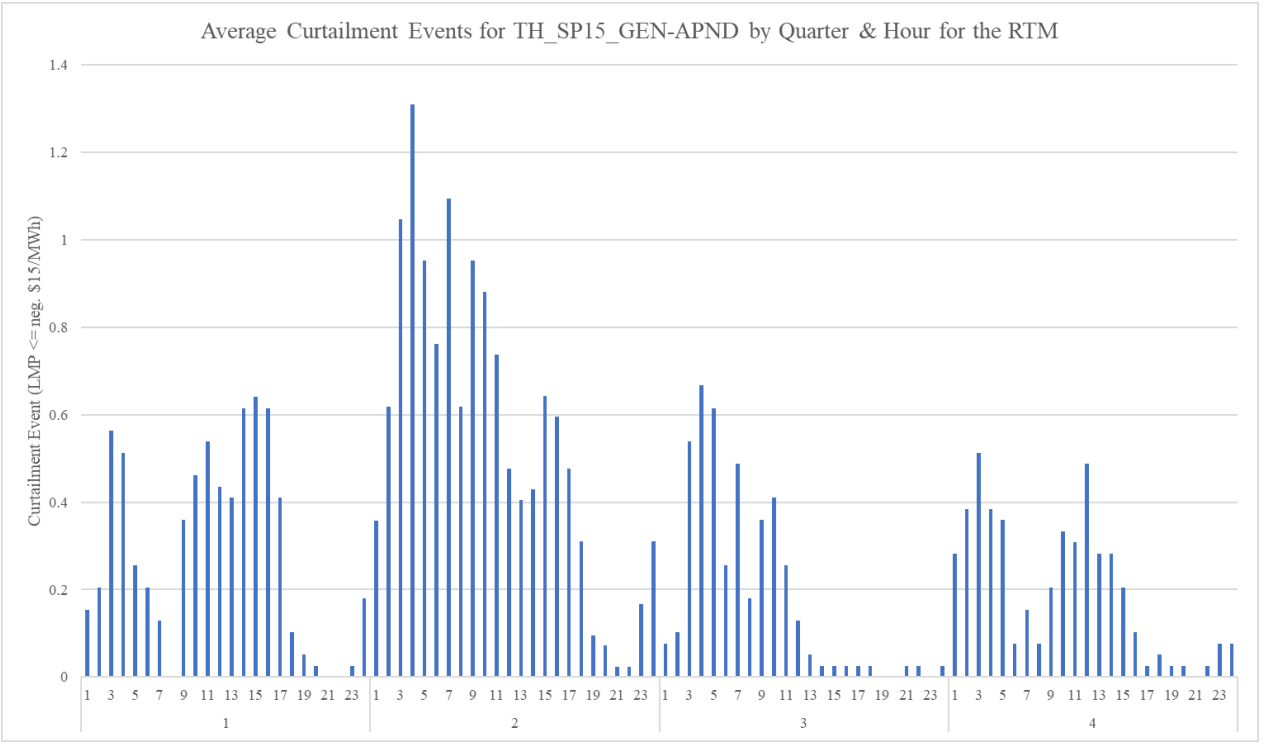
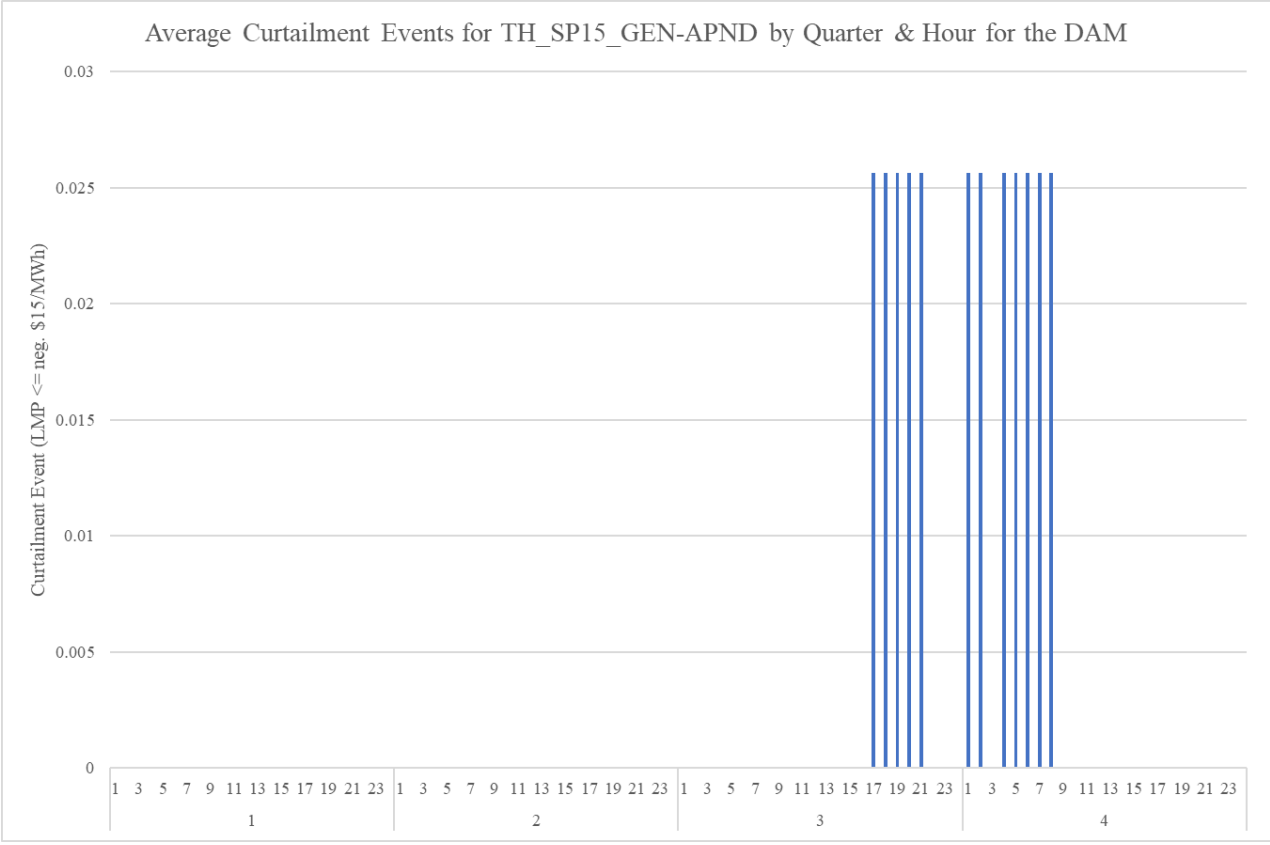


Table: TH\_SP15\_GEN-APND Average DAM  
Hourly Curtailment Event Forecast

Hour	Quarter			
	1	2	3	4
1	0.00	0.00	0.00	0.03
2	0.00	0.00	0.00	0.03
3	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.03
5	0.00	0.00	0.00	0.03
6	0.00	0.00	0.00	0.03
7	0.00	0.00	0.00	0.03
8	0.00	0.00	0.00	0.03
9	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00
17	0.00	0.00	0.03	0.00
18	0.00	0.00	0.03	0.00
19	0.00	0.00	0.03	0.00
20	0.00	0.00	0.03	0.00
21	0.00	0.00	0.03	0.00
22	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00
<b>Total Quarter</b>	0.00	0.00	0.01	0.01
<b>Total Year</b>	0.01			

Table: TH\_SP15\_GEN-APND Average RTM  
Hourly Curtailment Event Forecast

Hour	Quarter			
	1	2	3	4
1	0.15	0.36	0.08	0.28
2	0.21	0.62	0.10	0.38
3	0.56	1.05	0.54	0.51
4	0.51	1.31	0.67	0.38
5	0.26	0.95	0.62	0.36
6	0.21	0.76	0.26	0.08
7	0.13	1.10	0.49	0.15
8	0.00	0.62	0.18	0.08
9	0.36	0.95	0.36	0.21
10	0.46	0.88	0.41	0.33
11	0.54	0.74	0.26	0.31
12	0.44	0.48	0.13	0.49
13	0.41	0.40	0.05	0.28
14	0.62	0.43	0.03	0.28
15	0.64	0.64	0.03	0.21
16	0.62	0.60	0.03	0.10
17	0.41	0.48	0.03	0.03
18	0.10	0.31	0.03	0.05
19	0.05	0.10	0.00	0.03
20	0.03	0.07	0.00	0.03
21	0.00	0.02	0.03	0.00
22	0.00	0.02	0.03	0.03
23	0.03	0.17	0.00	0.08
24	0.18	0.31	0.03	0.08
<b>Total Quarter</b>	0.29	0.56	0.18	0.20
<b>Total Year</b>	1.22			

After examining the [historical CAISO curtailment data, its risk analysis, and the analysis of negative pricing and curtailments data](#), the City remains confident that the 2% minimum margin of procurement that it has institute provides the correct balance between risk management and excessive costs. The City will continue to monitor trends in the energy market, especially the curtailment levels of renewable resources, and if necessary, will adjust the minimum margin of procurement. Furthermore, the City has minimal exposure to delivery shortfalls related to project failure or delays due to the fact that [its projects are already online](#)~~the majority of its projects are already online, or expected to either come online shortly or contain contract provisions to allow the power to be sourced from other resources that are already online.~~

Following contract execution, CalChoice will ensure that RMEA remains closely coordinated with RPS suppliers, particularly developers of any new-build resource, to maintain an acute awareness of project development progress, including any anticipated issues that could delay expected initial deliveries or compromise overall project viability. Such communications are intended to provide the City with an early indication of such issues, which would allow “corrective procurement actions” to occur if the extent of such issues were determined to impact the City’s RPS compliance status.

While other CCA programs may choose to pursue larger planning reserves, the City observes that there does not seem to be a clear standard or related guidelines for setting such metrics. As such, the City has considered core objectives of its CCA program when establishing this metric, including compliance with pertinent regulatory mandates, specifically California’s RPS Program, as well as, and very importantly, rate competitiveness. The 2% planning reserve, which is applied annually based on the City’s projected retail sales, creates an effective margin of over-procurement equivalent to 5.2% in 2022~~5.6% in 2021~~ (relative to the prevailing interim annual RPS procurement target in that year, as previously mentioned in Section II), transitioning to 3.3% in 2030 (relative to the 60% annual procurement target).

When considering the perceived sufficiency of the City’s current planning reserve, it is also important to acknowledge the potential impacts on future retail sales imposed by the pandemic. Based on information provided by CalChoice and other CCA programs throughout the state, the City understands that there have been significant load reductions caused by current economic conditions. For renewable energy planning purposes, the City has yet to adapt its retail sales forecast to reflect such changes. Recent significant increases in inflation, and increases in interest rates to combat such inflation, are expected to slow the growth of the economy over the next few years. To the

~~extent that that occurs the pandemic (a 5-10% reduction appears to be a typical load impact relative to pre-pandemic electric energy usage, but the City understands that impacts in certain communities may actually be higher; actual impacts tend to vary in consideration of customer composition and other factors), but the extent to which such load reductions persist over time remains uncertain, particularly with California's reopening scheduled to occur in mid-June 2021. For renewable energy planning purposes, the City has yet to adapt (reduce) its retail sales forecast to reflect such changes, which may endure well into the future. To the extent that economic recovery is relatively slow~~ and retail sales fall below expectations during CCA operations, the City is expected to accrue actual renewable energy volumes in excess of its planning targets (including reserves) and may have a margin of over-procurement that is meaningfully higher than the noted 2% (of retail sales). Electric load within the City will be monitored over time to determine if related planning and procurement adjustments may be needed to protect the City from higher-than-anticipated renewable energy costs and related impacts to customer rates.

RMEA is aware that Section 399.13(a)(6)(A), and the ACR, note that generation variability and resource availability may impact the amount of future electricity delivered. As previously discussed, RMEA ~~will~~ considers this potential risk during its planning process as well as during related procurement activities. The City may continue to pursue contract structures that promote volumetric stability through the application of firm delivery quantities and/or performance guarantees that provide financial remedies/penalties in the event of delivery shortfalls. If necessary, the application of such penalties could be used to: 1) as a first priority, procure additional renewable energy supply to address delivery shortfalls; or 2) in the event of a determination of non-compliance, offset the cost of related penalties. The City's intent is to achieve and maintain compliance with applicable RPS mandates, and the latter option is a last resort that is not expected to apply.

Furthermore, the City is aware of the need to perform a risk assessment in this RPS Procurement Plan and, as previously described, presents the results of such an initial assessment~~and intends to present the results of such assessment in future RPS Procurement Plans~~. At this time, and as previously noted, RMEA observes~~intends to observe~~ a risk management/assessment process that focuses on the identification and selection of highly experienced, financially viable renewable energy sellers, a process which is believed to materially reduce the risk of delivery shortfalls ~~(and potential compliance deficits)—this process is being observed during the current renewable energy solicitation administered by CalChoice and is expected to result in the execution of one or more supply agreements with highly qualified suppliers.~~

RMEA continues to explore~~consider~~ the use of quantitative tools to further understand these risks, as evidenced by the risk assessment included above~~but has yet to identify a suitable tool at this point in time~~. In the future, RMEA's risk management/assessment process will inevitably continue to evolve in consideration of its unique renewable energy needs, market conditions, availability of requisite supply and ongoing track record in meeting California's RPS compliance mandates. For example, if RMEA believes that its understanding of responses to a future solicitation would improve through the use of a quantitative risk assessment tool, RMEA will accordingly pursue the use of such a tool. However, if the City and CalChoice believe that the current supplier selection process, which is intended to minimize/eliminate renewable energy delivery risk before contract execution occurs, results in the identification of: 1) low-risk supply sources that are already operational; or 2) highly experienced, financially viable project developers that have consistently demonstrated a successful development track record over time, then it may choose to forgo a related quantitative assessment as part of its risk

management/assessment process. To the extent that noteworthy changes are made to such process, RMEA will describe them in a subsequent RPS Procurement Plan, if required to do so.

Because of its relatively small size, it is likely that RMEA will engage in a relatively small number of long-term renewable energy supply agreements, so a meaningful delivery shortfall (relative to expectations) or project development failure amongst such contracts would seemingly result in compliance-related deficiencies for the City (related to its long-term contracting obligation) – RMEA is aware of the financial consequences associated with such deficiencies but believes that the previously described evaluation process for prospective suppliers as well as planned procurement activities will ensure its success in meeting applicable compliance mandates. Similar issues seem less relevant with regard to short-term renewable energy purchases, as the market continues to remain robust for CCA buyers and related supply seems readily available. As previously noted, RMEA believes that a keen focus on identifying highly experienced, financially viable long-term renewable energy suppliers is the best risk mitigation strategy for this important element of the RPS Program, and RMEA intends to observe this practice.

With respect to system reliability, the City is aware of the need to pursue a portfolio of renewable resources with diverse and complementary delivery profiles as well as complimentary infrastructure (namely, energy storage infrastructure) that will support the reshaping of renewable energy deliveries to better align with load. For example, renewable energy procurement efforts that may initially focus on relatively low-cost solar resources will often necessitate subsequent investments in co-located energy storage infrastructure and/or higher-cost baseload renewable generating technologies, such as those using geothermal, biomass and landfill gas fuel sources. These baseload renewable technologies are often priced at three-to-four

times the level of in-state photovoltaic solar generation but generally provide increased capacity value (due to the more predictable, baseload generating profiles of such resources) and related reliability enhancements. By ensuring a better match of energy and load, as well as procuring resources more capable of providing ancillary services than intermittent renewable resources alone, the City seeks to mitigate potential negative system impacts such as rolling outages or violations of current standards for ancillary services. Certain of the resources that may be procured to satisfy recent capacity mandates are also expected to support grid reliability and may include baseload renewable energy resources, renewable energy plus storage configurations or stand-alone battery storage configurations, all of which would be expected to improve grid reliability by some measure. Over time, the City will balance the often competing interests of cost and reliability~~Over time, the City will attempt to balance these competing interests~~ to support reasonably close alignment between supply and demand (reducing the need for pronounced resource ramping on the system), cost-effective procurement and overall grid reliability. The City is aware that low-cost, long-term solutions are challenging to identify but will remain committed to pursuing a conscientious planning process that balances grid reliability, compliance demonstration and customer cost impacts.

In terms of lessons learned related to risk management, the City observes that internally adopted, above-RPS planning targets generally serve as effective mitigation measures related to RPS compliance. While setting lofty RPS targets is not a viable or desirable option for all retail sellers, the City will continue to evaluate the sufficiency of its adopted planning reserve (MMoP) to reduce the risk of RPS compliance shortfalls. If existing supply commitments happen to underperform or future RPS contracting activities impose larger than anticipated risks (such as project failure, commercial operation delays and/or under-delivery), the City may increase its

noted planning reserve to provide additional protection against such risks. The extent to which such adjustments may occur is not known at this time but will be discussed, as necessary, in a future RPS Procurement Plan.

The City has also observed the value of resource diversity across a broad spectrum of considerations, including resource location, generating technology, suppliers/developers and contract structures, amongst other concerns. Long-term renewable supply commitments are inherently risky in the sense that such commitments expose the buyer and/or seller to a variety of unknown circumstances, including but not limited to evolving market prices and policy changes. Throughout a long-term contract relationship, it seems evident that geographic areas with initially low levels of negative pricing (and related curtailment of energy production) can materially change as new project development activity occurs, creating (or exacerbating) conditions of over-supply and related incidents of energy curtailment. This risk is particularly challenging to manage, as California's escalating RPS procurement mandates necessitate ongoing investment in new renewable generating infrastructure, which is often sited in resource-rich areas that become oversaturated with similar generating technologies (and related delivery profiles). These circumstances seem inevitable and, over the course of a long-term supply relationship, may expose the contracted parties to unexpected risks, including negative prices (and related budgetary impacts) and curtailed deliveries (which may compromise the fulfillment of mandated procurement targets by the buyer). The City will reevaluate its current renewable energy planning reserve to address anticipated curtailment and/or underperformance risk associated with specific projects placed under contract.

The City is also aware that risk can be diversified through various contract structures. For example, an "index-plus" pricing structure is useful in transferring nodal/market price risk to

the seller – in such structures, the buyer pays a fixed renewable premium, while the seller assumes risk associated with market price fluctuations but also receives market revenues (which could be higher or lower than anticipated) – even though the buyer receives the energy, renewable attribute and (in certain instances) capacity value as part of such a transaction, the buyer’s financial risk is generally limited to the payment of the renewable premium. For buyers who are averse to market price risk, the index-plus pricing structure effectively eliminates this concern but may result in higher overall contract costs (which may be acceptable, as a form of insurance, to mitigate market price exposure). In other structures, such as the “fixed-price” or “aggregate pricing” structure, the renewable energy premium and energy commodity (and oftentimes, capacity value) are reflected in a single price paid by the buyer – this structure deliberately allocates market price risk to the buyer, but the buyer may also pay a lower imputed renewable premium in instances where market revenues (realized when the energy commodity is delivered to the grid) closely approximate (or exceed) the aggregate renewable energy price. In evaluating potential contract structures, decisions can be made in consideration of risk allocation preferences, and the City has pursued (and will continue to pursue) contracting structures that balance such risks over time. To date, the City has pursued both structures and will continue to do so in the future.

#### **VIII. Renewable Net Short Calculation**

RMEA has provided an updated quantitative assessment, which is attached hereto as Appendix C, to support the qualitative descriptions provided in this RPS Procurement Plan. At this point in time and based on RMEA’s historical supplier performance as well as anticipated renewable energy contracting outcomes, a conservative two percent risk adjustment, [also referred to as the MMoP](#), has been incorporated in the quantitative assessment for “Online

Generation” – this adjustment was informed by CalChoice’s research regarding historical curtailments for wind and solar resources in the CAISO, as well as the risk analysis presented in Section VII.; a risk adjustment of two percent has been incorporated for RPS Facilities in Development, but the City observes that there are no supply commitments in place with facilities that have yet to achieve commercial operation at this point in time; ~~a risk adjustment of two percent has been incorporated for RPS Facilities in Development~~. If actual output happens to differ from the City’s expectations, it will incorporate a larger risk adjustment in a subsequent iteration of this RPS planning process. Additional adjustments will be incorporated in future quantitative assessments based on the unique characteristics of related supply agreements secured by the City.

#### **IX. Minimum Margin of Procurement (MMoP)**

The City is developing an electricity supply portfolio that will further the achievement of state mandates. The following table displays the City’s intended margin of RPS over-procurement based on the differential between the SB 100 procurement targets and the City’s internally adopted RPS procurement targets – this differential is defined as the City’s voluntary margin of over-procurement, or VMoP. It is readily apparent that the City has decided to forgo voluntary incremental purchases of RPS-eligible renewable energy, which is reflective of the prevailing priorities of the City’s customer base and leadership: these priorities place an emphasis on rate competitiveness and local control, rather than heightened levels of RPS procurement. This decision should not be construed as a reflection of the City’s commitment to fulfilling statewide RPS mandates. As further described below, the City has incorporated an RPS planning reserve, described as its minimum margin of procurement, or MMoP, to do just that.

## State & Internally Adopted Renewable Energy Requirements

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
SB 100 RPS Procurement Requirement (% of Retail Sales)	35.8%	38.5%	41.3%	44.0%	46.7%	49.3%	52.0%	54.7%	57.3%	60.0%
RMEA's Minimum Internally Adopted RPS Procurement Target (% of Retail Sales)	35.8%	38.5%	41.3%	44.0%	46.7%	49.3%	52.0%	54.7%	57.3%	60.0%
RMEA's Voluntary Margin of Procurement (% of Retail Sales)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
SB 100 RPS Procurement Requirement (% of Retail Sales)	35.8%	38.5%	41.3%	44.0%	46.7%	49.3%	52.0%	54.7%	57.3%	60.0%	60.0%	60.0%
RMEA's Minimum Internally Adopted RPS Procurement Target (% of Retail Sales)	35.8%	38.5%	41.3%	44.0%	46.7%	49.3%	52.0%	54.7%	57.3%	60.0%	60.0%	60.0%
RMEA's Voluntary Margin of Procurement (% of Retail Sales)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

As previously noted, the City's core goals and objectives emphasize the important of rate competitiveness and, therefore, the organization has adopted prudent RPS planning reserves without a VMoP. To address RPS compliance risk, the City uses its risk assessments, including its renewable net short calculations and curtailment analysis, to establish a Minimum Margin of Procurement to guide RPS compliance procurement planning. The City calculated the minimum margin of procurement, or MMoP, using a 2% risk adjustment (or planning reserve) that was applied to the City's annual retail sales estimates in each year of the planning period. Based on the manner in which the City has established its MMoP, as a 2% planning risk adjustment relative to statewide RPS mandates, the effective MMoP percentages observed by the City range from 3.3% to 5.26%, relative to the City's projected RPS compliance need, over the ten-year planning horizon. The following chart provides additional detail regarding the effective MMoP percentages observed by the City.

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
SB 100 RPS Procurement Requirement (% of Retail Sales)	35.8%	38.5%	41.3%	44.0%	46.7%	49.3%	52.0%	54.7%	57.3%	60.0%
RMEA's Minimum Internally Adopted RPS Procurement Target (% of Retail Sales)	35.8%	38.5%	41.3%	44.0%	46.7%	49.3%	52.0%	54.7%	57.3%	60.0%
RMEA's Minimum Margin of Procurement (% of Retail Sales)	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
RMEA's Minimum Margin of Procurement (% buffer relative to RPS Mandate)	5.6%	5.2%	4.8%	4.5%	4.3%	4.1%	3.8%	3.7%	3.5%	3.3%

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
SB 100 RPS Procurement Requirement (% of Retail Sales)	35.8%	38.5%	41.3%	44.0%	46.7%	49.3%	52.0%	54.7%	57.3%	60.0%	60.0%	60.0%
RMEA's Minimum Internally Adopted RPS Procurement Target (% of Retail Sales)	35.8%	38.5%	41.3%	44.0%	46.7%	49.3%	52.0%	54.7%	57.3%	60.0%	60.0%	60.0%
RMEA's Minimum Margin of Procurement (% of Retail Sales)	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
RMEA's Minimum Margin of Procurement (% buffer relative to RPS Mandate)	5.6%	5.2%	4.8%	4.5%	4.3%	4.1%	3.8%	3.7%	3.5%	3.3%	3.3%	3.3%

The City's MMoP is intended to address potential delivery variability for intermittent resources, curtailment risk, project delays and other operational peculiarities that may cause actual renewable energy deliveries to deviate from projections. Note that certain of the City's renewable energy deliveries are not subject to variability – such agreements reflect minimum fixed delivery quantities (or quantities with limited volumetric variability) with corresponding financial penalties (paid to the City by related sellers in the event of delivery shortfalls).

Presently, the renewable energy procurement targets reflected in the City's planning process reflect moderate, but prudent, planning reserves to allow for certain demand- and supply-side variability that could impact RPS compliance achievement. The targets reflected within this ~~Final 2021~~ RPS Procurement Plan reflect state mandated RPS procurement targets as well as the previously described two percent planning reserve. Staff assumes that future renewable procurement targets (inclusive of planning reserves necessary to meet RPS mandates) will consider a variety of factors, including but not limited to, the operational status of prospective renewable energy facilities to be placed under contract, the experience and general development track record of each project development team (associated with new resources), resource size (capacity), the location of prospective generating resources (for new facilities) and impacts of over-procurement to the CCA program's procurement budget and customer rates. Such considerations, amongst others, will be evaluated by the City in determining whether the proposed two percent margin of over-procurement should be adjusted

in the future. To the extent the City anticipates planning risk related to its renewable energy contract commitments, it will likely adjust its margin of over procurement accordingly.

### **IX.A. MMoP Methodology and Inputs**

The City's MMoP is intended to address an RPS failure rate at or above that which is reflected in the renewable net short reporting template. In the event of contract under-deliveries, commercial operation delays and/or project failures, the MMoP should be sufficient to ensure the City is compliant with the RPS procurement requirements. [As shown in Section VII above, the City's MMoP of 2% exceeds the historical level of curtailments in the CAISO grid \(shown as under 0.1% for wind and under 0.7% for solar\), and also exceeds the City's risk assessment of RPS contracts \(shown as 0.62% of retail load\).](#) The City's VMoP is the annual RPS-eligible minimum portfolio content identified in the City's internally adopted planning targets, which is currently equivalent to California's statewide RPS mandate.

As discussed in Section VIII, the City has incorporated risk adjustments to certain renewable energy delivery estimates associated with existing generating facilities. Achieving the City's MMoP necessitates higher levels of renewable energy procurement (ranging from 3.3% to 5.6% over the City's annual RPS compliance needs throughout the ten-year planning period), which accommodate the potential for delivery shortfalls (due to a variety of circumstances) while still allowing the City to meet prescribed RPS mandates.

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
SB 100 RPS Procurement Requirement (% of Retail Sales)	35.8%	38.5%	41.3%	44.0%	46.7%	49.3%	52.0%	54.7%	57.3%	60.0%
RMEA's Minimum Internally Adopted RPS Procurement Target (% of Retail Sales)	35.8%	38.5%	41.3%	44.0%	46.7%	49.3%	52.0%	54.7%	57.3%	60.0%
RMEA's Voluntary Margin of Procurement (% of Retail Sales, based on difference between SB 100 mandate and RMEA's internally adopted RPS target)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
RMEA's Minimum Margin of Procurement (% of Retail Sales)	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
RMEA's Minimum Margin of Procurement (% buffer relative to RPS mandate)	5.6%	5.2%	4.8%	4.5%	4.3%	4.1%	3.8%	3.7%	3.5%	3.3%
RMEA's Aggregate Planning Reserve: MMoP + VMoP (% buffer relative to RPS mandate)	5.6%	5.2%	4.8%	4.5%	4.3%	4.1%	3.8%	3.7%	3.5%	3.3%

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
SB 100 RPS Procurement Requirement (% of Retail Sales)	35.8%	38.5%	41.3%	44.0%	46.7%	49.3%	52.0%	54.7%	57.3%	60.0%	60.0%	60.0%
RMEA's Minimum Internally Adopted RPS Procurement Target (% of Retail Sales)	35.8%	38.5%	41.3%	44.0%	46.7%	49.3%	52.0%	54.7%	57.3%	60.0%	60.0%	60.0%
RMEA's Voluntary Margin of Procurement (% of Retail Sales, based on difference between SB 100 mandate and RMEA's internally adopted RPS target)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
RMEA's Minimum Margin of Procurement (% of Retail Sales)	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
RMEA's Minimum Margin of Procurement (% buffer relative to RPS mandate)	5.6%	5.2%	4.8%	4.5%	4.3%	4.1%	3.8%	3.7%	3.5%	3.3%	3.3%	3.3%
RMEA's Aggregate Planning Reserve: MMoP + VMoP (% buffer relative to RPS mandate)	5.6%	5.2%	4.8%	4.5%	4.3%	4.1%	3.8%	3.7%	3.5%	3.3%	3.3%	3.3%

The City will effectively ensure its compliance with applicable RPS mandates by procuring in consideration of applicable RPS mandates, plus the City's adopted MMoP. The City offers participating customers a portfolio comprised of renewable energy products which minimally meet statewide RPS procurement mandates (approximately 38.5% in 2022). Staff understands that the City Council may periodically consider changes to the level of renewable energy included within the City's default retail service offering but also understands that such content would not fall below statutory RPS mandates. If the City Council considers and adopts changes to its internal renewable energy procurement targets, the organization will accordingly update future RPS planning documents to reflect such changes.

Presently, the renewable energy procurement policy that has been adopted by the City Council specifies a renewable energy target that mirrors similar targets reflected in California's RPS Program, plus the previously described 2% planning reserve. As such, the City plans to gradually increase its procurement of RPS-eligible renewable energy over time, inclusive of the aforementioned planning reserve, which is intended to mitigate risks associated with under delivery and/or failed (or delayed) project development.

#### **IX.B. MMoP Scenarios**

The City plans to meet the annual program renewable goals reflected in the table presented in Section IX (above), including the MMoPs reflected therein. As reflected in this table, the City's anticipated MMoP percentages range from 3.3% to 5.6% across the 10-year planning period (relative to the prevailing interim annual RPS procurement mandate). During its bid evaluation and supplier selection processes, the City considers a variety of risks and believes that such risks are sufficiently addressed within its MMoP calculation – in consideration of the City's considerable reliance on fixed-volume renewable supply commitments, it has no reason to doubt the sufficiency of the MMoP reflected in its internally adopted RPS planning targets. This noted, if the City's resource planning and contract management processes happen to identify substantive concerns with the limited new-build renewable projects included/to be included in its supply portfolio, delivery shortfalls or other issues potentially impacting the proportionate level of renewable energy reflected in its aggregate supply portfolio, the City will engage in expedited procurement processes to address such shortfalls (as a near-term solution) and also reevaluate the sufficiency of its MMoP (as a longer-term solution). As demand- and supply-side data are monitored in each year, the City may adjust planned short-term purchases and/or pursue surplus sales arrangements if actual renewable energy deliveries are tracking above its anticipated needs. By the end of each calendar year, the City hopes to manage the level of its internal planning

reserve so that actual renewable energy deliveries are closely aligned with California's RPS Procurement Target.

The City will also model demand-side sensitivities that may impact MMoP calculations. In addition to load variability resulting from ongoing (minor) fluctuations in customer participation, the City will also monitor electric vehicle penetration rates, net energy metering participation rates and other considerations that may impact overall customer energy requirements and related MMoP calculations

## **X. Bid Solicitation Protocol**

### **X.A. Solicitation Protocols for Renewables Sales**

RMEA does not have immediate plans to issue a solicitation for sales of renewable energy products. If such a need arises in the future, however, the City will consider a protocol that: 1) ensures the City remains compliant with applicable RPS procurement mandates; 2) minimizes overall portfolio costs to the greatest extent practical; and 3) provides sufficient flexibility to accommodate reasonably anticipated supply-side and demand-side changes that could impact the City's overall renewable energy requirements.

### **X.B. Bid Selection Protocols**

Consistent with Section 399.13(a)(6)(C), CalChoice, on behalf of RMEA, shall conduct solicitations for requisite energy resources, including specific needs for eligible renewable energy products (reflecting locational preferences, when applicable, for such resources), generating capacity, and required online dates to assist in determining what resources fit best within the City's supply portfolio. CalChoice provides necessary analytical support and advisory services to RMEA during such processes. Since CCA program governing boards are comprised of local elected officials, these solicitations and, in particular, related procurement decisions are

overseen by elected representatives of the community with guidance provided by CalChoice. Such solicitations and procurement decisions will seek to comply with locally-set targets that tend to exceed applicable RPS mandates and provide value to the community by supporting increased use of renewable energy resources. Any long-term renewable energy supply agreements resulting from RMEA's participation in CalChoice-administered solicitation processes will be brought to the City's Governing Council for approval prior to execution.

Through its relationship with CalChoice, the City is actively engaged in developing solicitation protocols for requisite renewable energy supply and has incorporated a variety of considerations in related bid requirements. Pursuant to Public Utilities Code 399.13(a)(6)(C)<sup>1</sup> and discussions with CalChoice, these considerations, which will be focused on solicitation protocols, bid evaluation and supplier selection, include:

1. Overall quality of response, inclusive of completeness, timeliness, and conformity;
2. Price and relative value within the City's supply portfolio;
3. Project location and local benefits;
4. Project development status, including but not limited to progress toward interconnection, deliverability, siting, zoning, permitting, and financing requirements;
5. Qualifications, experience, financial stability, and structure of the prospective project team (including its ownership);
6. Environmental impacts and related mitigation requirements, including impacts to air pollution within communities that have been disproportionately impacted by the existing generating fleet;
7. Potential impacts to grid reliability;
8. Potential economic benefits created within communities with high levels of poverty and unemployment;
9. Acceptance of the City's standard contract terms; and
10. Development milestone schedule, if applicable.

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<sup>1</sup> Cal. Pub. Util. Code § 399.13(a)(6)(C) ("Consistent with the goal of increasing California's reliance on eligible renewable energy resources, the renewable energy procurement plan shall include all of the following: A bid solicitation setting forth the need for eligible renewable energy resources of each deliverability characteristic, required online dates, and locational preferences, if any.").

When evaluating future long-term renewable purchase opportunities, the City will also consider “the employment growth associated with the construction and operation of eligible renewable energy resources.” More specifically, to the extent the City procures new RPS resources in solicitations where qualitative factors are considered, it will include a qualitative assessment of the extent to which proposed project development activities will support this goal. Such determinations will be based on information provided by the prospective supplier and the City’s independent assessment of such information. When the City procures RPS resources, it will require bidders to submit information on projected California employment growth during construction and operation. This data will include the expected number of hires, duration of hire, and an indication of whether the bidder has entered into Project Labor Agreements or Maintenance Labor Agreements in California for the proposed project.

Pursuant to Public Utilities Code 399.13(a)(8)(A), the City will also consider the inclusion of evaluative preference for “renewable energy projects that provide environmental and economic benefits to communities afflicted with poverty or high unemployment, or that suffer from high emission levels of toxic air contaminants, criteria air pollutants, and greenhouse gases.”<sup>2</sup> To the extent that the City procures RPS resources through solicitations where qualitative factors are considered, impact on disadvantaged communities will be considered. Such information will be gathered by requiring prospective suppliers to answer the following questions: Is your facility located in a community afflicted with poverty or high unemployment

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<sup>2</sup> Cal. Pub. Util. Code § 399.13(a)(8)(A) (“In soliciting and procuring eligible renewable energy resources for California-based projects, each electrical corporation shall give preference to renewable energy projects that provide environmental and economic benefits to communities afflicted with poverty or high unemployment, or that suffer from high emission levels of toxic air contaminants, criteria air pollutants, and greenhouse gases.”).

or that suffers from high emission levels? If so, the participant will be encouraged to describe how its proposed facility can provide the following benefits to adjacent communities:

- Projected hires from adjacent community (number and type of jobs);
- Duration of work (during construction and operation phases);
- Projected direct and indirect economic benefits to the local economy (i.e., payroll, taxes, services);
- Emissions reduction – identify existing generation sources by fuel source within 6 miles of proposed facility and indicate whether the proposed facility will replace/supplant the identified generation sources; and
- To the extent that the proposed generating facility is expected to replace/supplant an existing generating facility, the prospective supplier will be asked to quantify the associated emission impacts of this transition.

Certain of these considerations were incorporated during the evaluation of responses submitted through CalChoice’s recent solicitation for long-term renewable energy supply; others will be reflected in future solicitations, as appropriate. Based on the success of its ongoing solicitation process(es), RMEA may adapt these considerations.

Consistent with the direction in the ACR, RMEA has provided a copy of its most recent solicitation materials to Commission Energy Division staff. RMEA’s most recent solicitation information is available at the following website:

<https://californiachoiceenergyauthority.com/our-services/>.

#### **X.C. LCBF Criteria**

The Least-Cost Best Fit methodologies approved by the Commission pursuant to D.04-07-029, D.11-04-030, D.12-11-016, D.14-11-042, and D.16-12-044 are expressly only

directly applicable to IOUs and the Commission does not have jurisdiction over the solicitation protocols of CCAs. However, consistent with Section 399.13(a)(9),<sup>3</sup> RMEA considers best-fit attributes to help minimize overall renewable energy procurement costs while generally supporting electric grid reliability.

In particular, the City anticipates considering “least cost best fit” (“LCBF”) during the evaluation of responses to its future renewable energy solicitation(s). From the City’s perspective, use of the term “costs” should appropriately include considerations beyond the basic price of renewable energy. More specifically, costs should include a broad range of considerations, such as: (1) reputational damage resulting from failure to meet state-mandated and/or internally established renewable energy procurement targets; (2) compliance penalties resulting from failed project development efforts or delivery shortfalls; (3) administrative complexities related to dealing with inexperienced suppliers (such as prolonged contract negotiation processes and uncertainties related to project milestone timing and achievement); and (4) impacts to planning certainty resulting from higher risk projects. These factors, as well as various others, will be considered by the City as components of its cost evaluation processes, which may lead to the selection of offers that aren’t necessarily the lowest cost option(s), as expressed on a dollar-per-MWh basis. With regard to “fit”, this aspect of a prospective supply opportunity has as much to do with compatibility (between the City and its suppliers) and alignment with key local objectives as it does with balancing customer usage and expected project deliveries, particularly when considering long-term contracting opportunities that will necessitate a constructive working relationship over a period of ten years or more. The City

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<sup>3</sup> Cal. Pub. Util. Code § 399.13(a)(9) (“In soliciting and procuring eligible renewable energy resources, each retail seller shall consider the best-fit attributes of resource types that ensure a balanced resource mix to maintain the reliability of the electrical grid.”).

also interprets the term “fit” to mean the general suitability of a project opportunity in promoting grid reliability – while the City has no explicit operational or maintenance responsibilities related to the local distribution system serving its customers or the bulk electric system at large, it is aware of the profound importance of supporting grid reliability through its procurement processes. With this in mind, the City will make best efforts to balance the demands of California’s rigorous RPS compliance mandates with its interest in promoting such reliability. This is no small task, and the City expects that considerations related to grid reliability will be incorporated at each stage of its planning and procurement processes but also acknowledges that the full scope of its RPS contract/resource portfolio (including related impacts to grid reliability) will significantly evolve throughout the organization’s operating history. Over time, the City expects to thoughtfully assemble a diversified portfolio of RPS contracts/resources that will not only contribute to the City’s achievement of applicable compliance mandates but also to improved stability and reliability of California’s electric system. As such, the City’s LCBF methodology will consider a broad range of components, including those previously noted, balancing a variety of pertinent considerations at the time each renewable purchase opportunity is being evaluated.

Additionally, the requirement of Section 399.13(a)(9) to give preference to renewable projects located in certain communities is expressly only applicable to “electrical corporations” and is not mandatory for CCAs.<sup>4</sup> However, the City recognizes the need to help mitigate the impacts of air pollution in regions of the state where communities have

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<sup>4</sup> Cal. Pub. Util. Code § 399.13(a)(7)(1) (“In soliciting and procuring eligible renewable energy resources for California-based projects, each electrical corporation shall give preference to renewable energy projects that provide environmental and economic benefits to communities afflicted with poverty or high unemployment, or that suffer from high emission levels of toxic air contaminants, criteria air pollutants, and greenhouse gases.”).

been disproportionately impacted by the existing generating fleet as well as the need to bring economic benefits to communities with high levels of poverty and unemployment. Consistent with this recognition, the City will consider the manner in which air pollution may be impacted during its renewable energy solicitation process(es) and related project selection.

## **XI. Safety Considerations**

RMEA holds safety as a top priority. Since RMEA does not own, operate, or control generation facilities, RMEA's procurement of renewable resources does not present any unique safety risks. This Section describes how RMEA has taken actions to reduce the safety risks posed by its renewable resource portfolio and how RMEA supports the state's environmental, safety, and energy policy goals.

As the City pursues future renewable energy purchases, it will consider requiring verbiage addressing adherence (of the seller/project operator) to prudent electrical practices and applicable safety requirements, including compliance with laws and regulations relating to safety. During future contracting efforts, the City will perform an assessment of the supplier's willingness to include such provisions as well as any related impacts to pricing/cost – the City is aware that requesting more stringent processes and/or requirements may trigger requested price increases by the seller/supplier. To the extent that product pricing would meaningfully increase due to the inclusion of such provisions, the City would need to evaluate budgetary impacts and other risks before proceeding. The City is hopeful that most suppliers will be agreeable to the inclusion of such provisions and will be diligent in requesting such language in its future contracts. In addition, RMEA has provided additional information below on its existing safety practices.

### **XI.1. Wildfire Risks and Vegetation Management**

In negotiating contracts with renewable generating facilities, RMEA works to ensure that the facility operator complies with all relevant safety requirements associated with the maintenance and operation of the facility. In these agreements, RMEA includes contract provisions that require the counter party to operate and maintain the facility in compliance with all relevant laws and prudent operating practices.

At this point in time, the City has yet to adopt specific procurement policies or preferences focused on the acquisition of forest biomass resources. The City is aware of the mitigating impacts that biomass generators, which use forestry waste as feedstock, may have on wildfire risk and will consider the adoption of a related procurement policy in the future. Furthermore, the City does not believe that any of its contracts with specified renewable generating facilities are located within high fire risk areas. In the future, the City will coordinate with CalChoice when considering project locations that may be located in fire-prone regions as well as related risk adjustment factors that may be appropriate for such facilities.

In future solicitations, RMEA will identify whether any of the bidding generating facilities are located within Tier 2 or Tier 3 of the Commission's Fire-Threat Map. When evaluating executing a contract with a facility located in Tier 2 or Tier 3, RMEA will consider requiring the seller to demonstrate that it taken adequate precautions associated with the facility's elevated risks, including specific wildfire prevention and safety measures for any construction, operation, and maintenance activities.

## **XI.2. Decommissioning Facilities**

To date, the City has not developed any plans or requirements related to the disposition of generating facilities following completion of applicable delivery terms. RMEA's contracts with renewable generating facilities generally require that the facility operates in compliance with all

applicable laws and prudent operating practices. The City assumes this broad terminology generally entails the safe disposition of assets following expiration of their useful life (to the extent that the useful life of such facilities expires at the same time as the noted delivery term involving RMEA). This noted, the duration of RMEA's renewable energy supply commitments is expected to be shorter than the useful life of most, if not all, facilities placed under contract, so it will be impractical for RMEA to monitor such activities after its relationship with suppliers has ended.

For future contract negotiations, RMEA will evaluate requiring the seller to provide a project safety plan or a similar type of reporting document, which will include information on procedures for identifying and remediating safety hazards, as well as describing any relevant requirements (such as those associated with the permitting of the facility) for the decommissioning of the facility.

### **XI.3. Climate Change Adaptation**

The City has not adopted procurement policies or preferences relating specifically to climate change risks. In future solicitations, the City will consider developing additional bid evaluation criteria based on climate change risk factors, including but not limited to risks associated with facilities located in regions that are forecasted to be impacted by higher instances of sea-level rise, flooding, wildfires, and/or elevated temperatures.

### **XI.4. Impacts During Public Safety Power Shut-off (PSPS) Events**

While the City does not have any specific predictions regarding future impacts related to PSPS events, it is likely that a PSPS event impacting the City would marginally reduce retail electric sales for CCA customers and, as a result, would generate a very small increase in the proportionate share of renewable energy supply accruing to the City (if renewable supply

agreements continue to perform as expected during such events).

RMEA is considering the need to evaluate the impact of prior PSPS events on its renewable generating facilities (under contract) to quantify the amount of generation that was lost due to the facility being taken offline by a PSPS event. RMEA may also assess the risk of the loss of future generation associated with PSPS events both for facilities already online and for facilities under development. RMEA's preliminary assessment is that the total quantity of any PSPS-related reductions in RPS-eligible generation (associated with the facilities in RMEA's portfolio) is likely minimal and generally offset by the reduction in retail sales (also related to the PSPS event). In light of this, the likelihood of a material impact to the City's renewable energy planning process or related performance metrics is extremely low.

#### **XI.5. Biomass Procurement**

While RMEA has no specific biases (for or against) biomass resources, the prospect of procuring such resources will be dependent upon offers received during future solicitation processes. In fact, the City has already entered into a long-term PCC3 supply agreement, which will be sourced from existing biomass facilities located within California – the RPS procurement opportunity was selected in consideration of: 1) product availability and the suitability of such product in the City's overall RPS supply portfolio; 2) cost-effectiveness; and 3) volumetric predictability (due to the anticipated baseload delivery profile associated with biomass generating resources). To date, biomass procurement opportunities have been limited, relative to other available renewable energy procurement opportunities, and have been comparatively costly (often 200%, or more, relative to pricing levels associated with other renewable generating technologies). To the extent that future biomass offers/proposals are competitive (with similar offers received from other resource types) and/or in the event the City adopts policies explicitly

supporting the acquisition of biomass energy resources, it will consider further inclusion of biomass energy within its future renewable energy supply portfolio. Biomass procurement opportunities may also be considered as a means to increase resource adequacy capacity under contract.

## **XII. Consideration of Price Adjustment Mechanisms**

In the future, and consistent with SB 350 and SB 100, RMEA will review the prospects of incorporating price adjustments in contracts with online dates more than 24 months after the date of contract execution. As noted in the ACR, such price adjustments could include price indexing to key components or to the Consumer Price Index. To date, incorporating such provisions has been challenging due to the inability of buyers and sellers to reach mutually agreeable terms related to pricing adjustments.

## **XIII. Curtailment Frequency, Forecasting, Costs**

This Section responds to the questions presented in Section 65.13 of the ACR<sup>5</sup> and describe RMEA's strategies and experience so far in managing RMEA's exposure to negative pricing events, overgeneration, and economic curtailment for RMEA's region and portfolio of renewable resources.

### **XIII.1. Factors Having the Most Impact on the Projected Increases in Incidences of Overgeneration and Negative Market Price Hours**

RMEA continues to learn about California's evolving energy market, including information and considerations related to energy curtailment, potential cost impacts, contracting considerations and other concerns. The following represents RMEA's understanding of this topic, which may impact future procurement processes.

Due in large part to the rapid increase in the amount of wind and solar generating

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<sup>5</sup> ACR at ~~33-34~~28-30.

facilities that have been brought online throughout the western United States, the California Independent System Operator's ("CAISO") balancing authority area has experienced an increasing frequency and magnitude of curtailment and negative pricing events. As of the end of 2019, California had over 12,800 MW of solar, 9,400 MW of behind-the-meter solar, and 5,900 MW of wind.<sup>6</sup> This increased capacity results in discrete periods where the majority of load in the CAISO is served by solar and wind resources. The monthly maximum load served by wind and solar in the CAISO has averaged ~~64.3~~<sup>61.4</sup>% over the past ~~43~~ years (May 2018 to May 2022<sup>+</sup>), and in May of 2022 the monthly maximum load served by wind and solar was just under 95%, while the maximum 5-minute amount of all renewables serving load was 103.5%~~in April of 2021 the monthly maximum load exceeded 85%.~~<sup>7</sup> To address the resulting instances of oversupply, the amount of curtailment of wind and solar in the CAISO has significantly increased each year from 2015 through 2020, totaling 187,000 MWh in 2015, 308,000 MWh in 2016, 379,510 MWh in 2017, 461,043 MWh in 2018, 965,241 MWh in 2019, and 1,586,500 MWh in 2020.<sup>8</sup> For 2021, the total level of wind and solar curtailments was 1,504,803 MWh.<sup>9</sup> Curtailment typically occurs most frequently during the months of March, April, and May when hydroelectric generation is historically at its highest. Curtailment levels and percentages for the CAISO, as well as an analysis of negative prices and forecasted curtailments from those negative prices, were presented above in Section VII.

In the CAISO energy markets, much of the curtailment of renewable resources is

<sup>6</sup> California Energy Commission, Renewable Energy Tracking Progress, Feb. 2020, at 6, *available at* [https://www.energy.ca.gov/sites/default/files/2019-12/renewable\\_ada.pdf](https://www.energy.ca.gov/sites/default/files/2019-12/renewable_ada.pdf).

<sup>7</sup> CAISO, Monthly Renewables Performance Report, May 2022<sup>+</sup>, *available at* <http://www.caiso.com/Documents/MonthlyRenewablesPerformanceReport-May2022.html>~~<http://www.caiso.com/Documents/MonthlyRenewablesPerformanceReport-May2021.html>~~.

<sup>8</sup> CAISO, Managing Oversupply, Wind and Solar Curtailment Totals, updated June 6, 2021, *available at* <http://www.caiso.com/informed/Pages/ManagingOversupply.aspx>.

<sup>9</sup> See Curtailment table in Section VII above.

achieved through the market process because of renewable energy resources voluntarily submitting bids into the energy markets, which cause them to shut down when market conditions create low energy prices. Because of this structure, the curtailment data provided will also be indicative of when negative prices occur. The City recognizes this connection and thus the analysis above in Section VII as to why curtailments are not expected to increase as they have over the past few years will apply to negative prices in a similar manner to curtailments. This has influenced CalChoice's ten-year negative price forecast, which mirrors the frequency of historical renewable energy curtailments. As explained elsewhere in this document, the City has taken steps through its contracting to reduce its risk exposure to low prices and curtailment of renewable resources.

RMEA will continue to monitor this situation to the extent such circumstances are likely to impact contract administration and/or future procurement activities. If prospective renewable generating opportunities are located in areas that are prone to frequent instances of negative market pricing, RMEA will be sure to evaluate such data to better understand prospective financial impacts and/or pursue contractual pricing structures that will insulate the CCA program from such risks.

### **XIII.2. Written Description of Quantitative Analysis of Forecast of the Number of Hours Per Year of Negative Market Pricing for the Next 10 Years**

Based on RMEA's existing renewable energy supply agreements, the CCA program has yet to incur exposure to negative price risk (related to requisite renewable energy transactions). Historical renewable energy deliveries have been priced on an index-plus basis, capping RMEA's financial exposure to the stated renewable energy premium in such contracts. ~~In the future, however,~~ RMEA recently began ~~will begin~~ taking deliveries under new supply agreements (with 2021 and 2022 delivery start dates), which use both index-plus and fixed

pricing structures. These contracts, however, reflect explicit negative pricing protections for the buyer, which cap RMEA's financial exposure at the stated bundled renewable energy cost. To the extent that negative pricing occurs, the sellers, which also serve as the scheduling coordinators under each supply agreement, would be responsible for such costs or could choose to pursue curtailment, if negative pricing was too punitive to justify facility operation. However, these contracts also reflect production guarantees, which would limit prospective curtailment activities based on a guaranteed minimum level of renewable energy production, below which the seller would be subject to payment of financial penalties to RMEA. Based on early-stage deliveries from these contracts, energy curtailments have not resulted in production deviations relative to the City's expectations – typical resource intermittency issues, however, have results in some variations from forecasted production levels. RMEA has started monitoring nodal pricing levels associated with these contracts (see the analysis of negative prices provided above in section VII) and if negative prices become prevalent, the City will prepare a negative price forecast to assist in its understanding of future production deficits (that possibly occur under such scenarios) – because pricing conditions are prone to sudden and significant changes, the “shelf life” of such a forecast is expected to be very brief and subject to regular updates~~In consideration of the 2021 and 2022 delivery start dates for these contracts as well as pertinent contract pricing structures, RMEA is now considering the preparation of a negative price forecast related to these supply arrangements – because pricing conditions are prone to sudden and significant changes, the “shelf life” of such a forecast would be very brief and would be of limited use in RMEA's upcoming planning process.~~

As described above, RMEA has evaluated historical curtailment trends for wind and solar generating technologies located within the CAISO footprint over the past four years and believes

such data may be instructive in understanding the energy curtailment risk associated with these generating technologies into the future. CalChoice's ten-year negative price forecast mirrors the frequency of historical renewable energy curtailments. As described above, RMEA has taken this forecast of curtailment and negative pricing into consideration in developing its MMoP.

RMEA is aware that curtailment activities may reduce expected renewable energy deliveries, but based on historical nodal pricing adjacent to the noted wind resources, RMEA expects that curtailment activities will be limited. Moving forward, RMEA will continue to monitor historical prices at such nodes, and if instances of negative pricing become prevalent, it will prepare the noted forecast to better understand the periods of time during which curtailment activities may be more likely to occur (even though such activities would not impose direct financial impacts to RMEA). Any information/projections prepared by RMEA in this regard will be shared in a subsequent RPS Procurement Plan.

### **XIII.3. Experience, to Date, With Managing Exposure to Negative Market Prices and/or Lessons Learned from Other Retail Sellers in California**

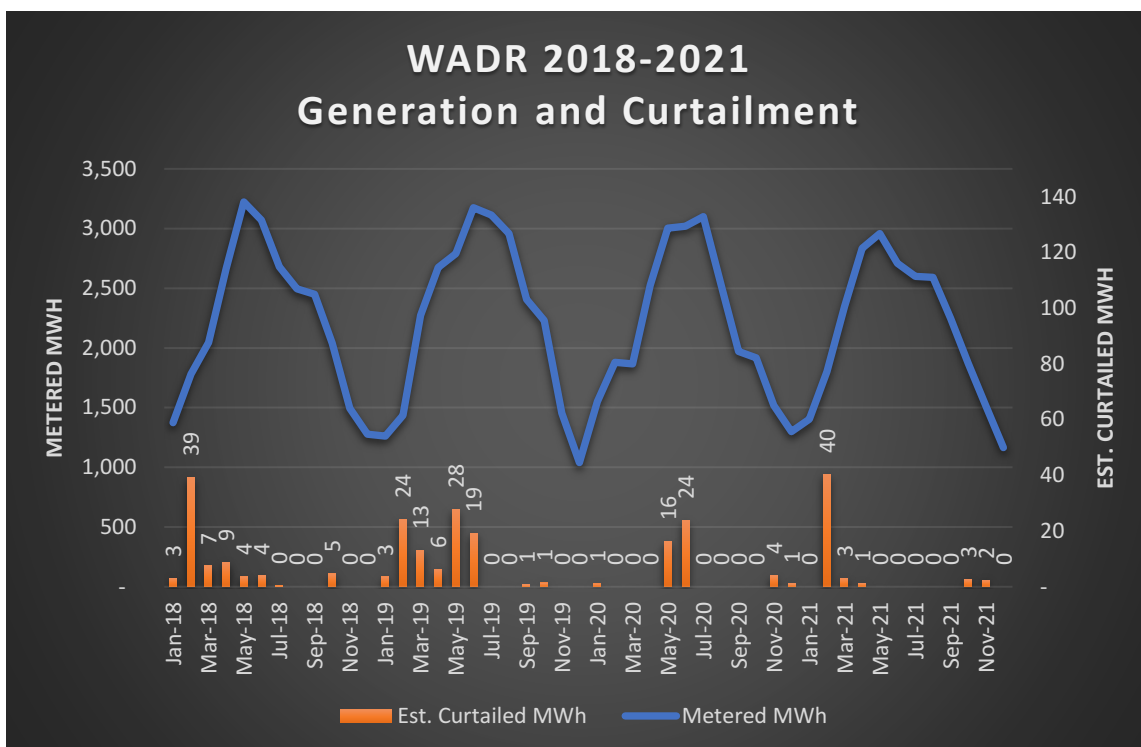
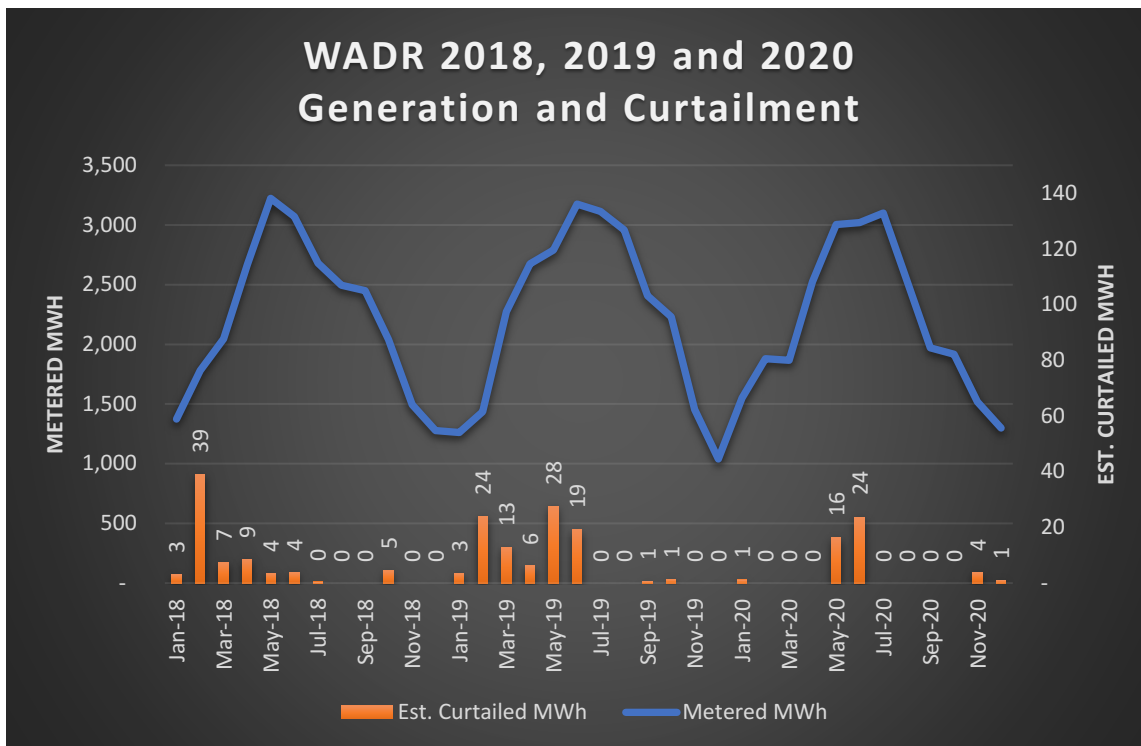
Based on RMEA's existing renewable energy supply agreements, historical renewable energy deliveries have utilized index-plus pricing structures and fixed/firm volumetric commitments. As such, RMEA has not been previously exposed to negative price risk (related to its renewable supply portfolio) and has not needed to manage exposure to negative market prices. This approach to ~~early-stage~~ renewable energy contracting was deliberate, allowing RMEA to build operational experience and knowledge regarding California's energy market before pursuing contract structures that required a deeper understanding of market tendencies, increased data analysis and more intensive coordination with renewable energy suppliers.

Based on its association with CalChoice, which facilitates informational sharing and interagency coordination amongst its members, the CCA program has been made aware of

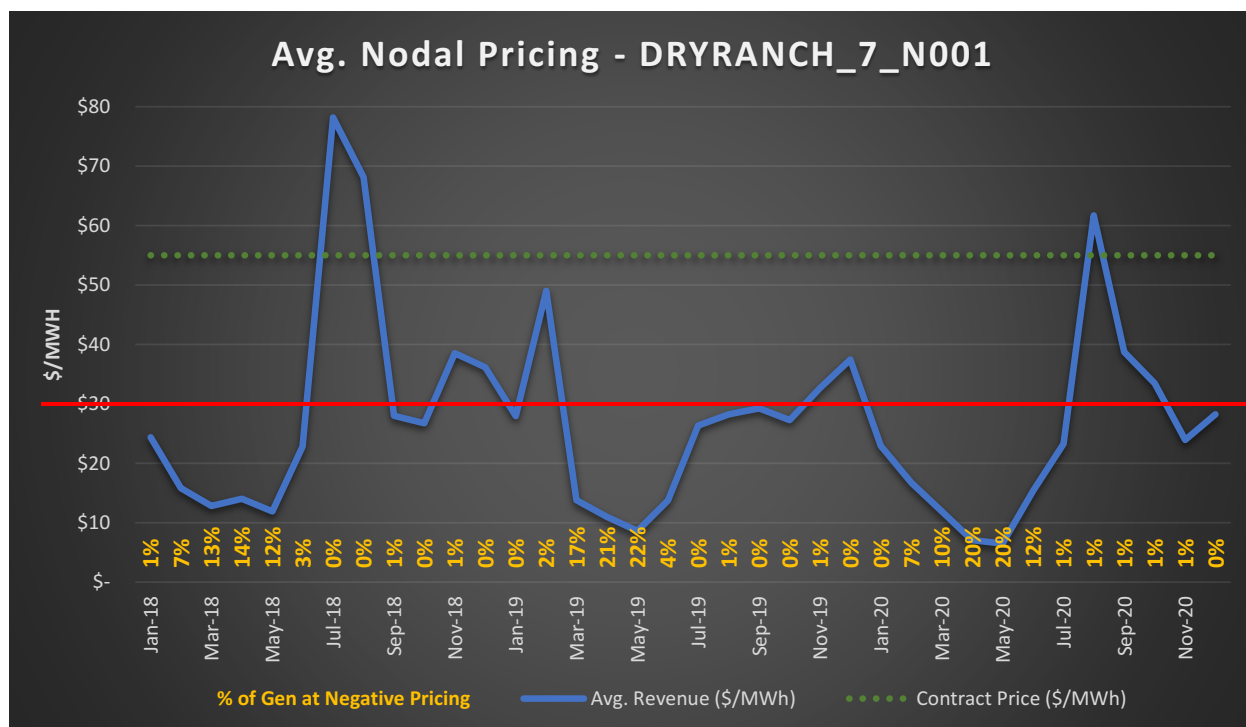
LCE's ongoing experiences managing negative pricing and curtailment risk. LCE has advised CalChoice of the following information regarding its first long-term power purchase agreement with the 10 MW Western Antelope Dry Ranch ("WADR") photovoltaic solar facility, which is located in Lancaster. During its operating history with this renewable generating facility, LCE has experienced instances of negative pricing at certain points in time. Recent data suggests that such instances are more frequent during the Spring season (months of March, April and May) and, consistent with the CCA program's observations regarding curtailment reflected in Section XIII.1, indicates that suppressed pricing generally results from relatively strong solar production throughout the region, coupled with comparatively low energy usage (when moderate seasonal temperatures prevail). To the extent that California experiences strong regional hydroelectric production/imports, negative pricing pressures may be exacerbated.

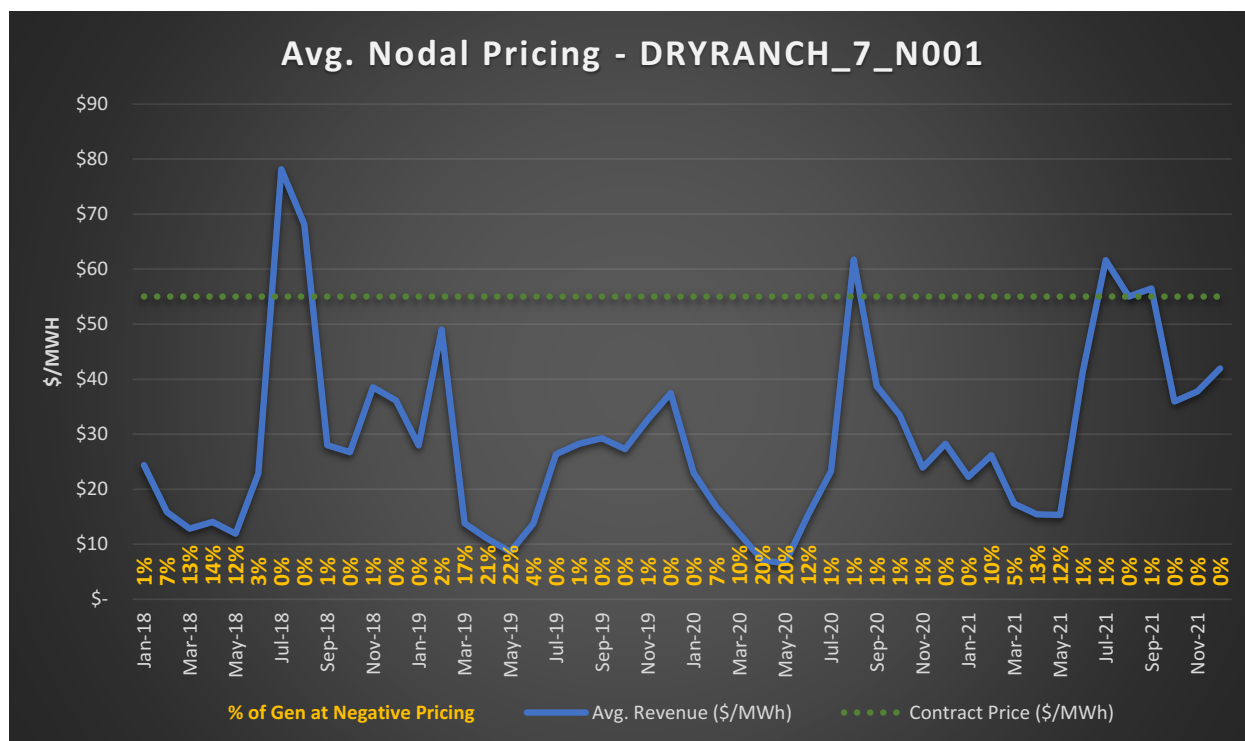
Based on 2018, 2019, ~~and 2020~~, and 2021 historical data, CalChoice observed that negative prices have impacted facility generation during ~~7+10%~~ to 22% of solar-producing hours during the months of February, March, and April~~March, April and May~~. Negative pricing in other months is far less prevalent, affecting facility generation on a limited basis (occurring during zero to ~~10~~7% of hours in which facility generation has occurred). In terms of curtailment, the CCA program understands that LCE has developed a bidding strategy with its scheduling coordinator that limits exposure to negative pricing based on a pre-determined bid floor (meaning, a pre-determined negative price, below which facility generation would be curtailed), but LCE has only experienced facility curtailments totaling ~~261~~242 MWh over the aforementioned ~~four~~three-year period, or ~~0.23~~0.2% of total potential energy production (which approximates ~~106~~80,000 MWh during this same ~~four~~three-year period). The impacts of curtailment/negative pricing costs incurred by LCE have been similarly limited. The following

chart indicates total monthly generation from the WADR facility during the 2018, 2019, and 2020, and 2021 calendar years as well as estimated monthly curtailed MWh (note the differences in scale reflected on each axis).



Adjacent nodal pricing also remains relatively strong, despite substantial solar generation within the region. Average energy pricing at the DRYRANCH\_7\_N001 node, the basis for WADR energy settlements, continues to show limited incidents of negative pricing. Over the ~~four~~three-year period reflected in CalChoice's analysis, average revenues collected by LCE for WADR-generated electricity are ~~\$28.39~~~~nearly \$26.04~~/MWh. The following chart reflects average nodal pricing during the 2018, 2019, 2020, and 2021 ~~and 2020~~ calendar years as well as the percentage of WADR generation occurring during periods of negative pricing.





Over time, CalChoice will continue monitoring pricing and curtailment data to determine if regional grid conditions are materially changing – [four years is a relatively brief period of time for such an analysis, particularly when the composition of resources interconnected to California’s bulk electric system continues to undergo significant changes, and while the City finds this information to be helpful, it is also mindful that such changes may substantially alter](#)~~three years is a relatively brief period of time for such an analysis and while LCE found this information to be helpful, it is also mindful that the dynamic nature of California’s bulk electric system may prompt significant changes to~~ the trajectory of pricing data at this node. To the extent that negative prices become more severe (meaning, more deeply negative), the CCA program understands that LCE may adapt its bidding strategy to limit potential financial impacts. Curtailed energy volumes will also be monitored by CalChoice over time, but based on MWh curtailed to date, the CCA program understands that LCE does not foresee any imminent

concerns impacting its achievement of compliance with RPS procurement mandates. CalChoice is prepared to support similar data monitoring for other supply opportunities that may be pursued by its membership and will coordinate with such members regarding pertinent bidding strategies, as appropriate.

If the CCA program pursues supply agreements that could expose the organization to negative pricing and curtailment risk, the CCA program would consult with CalChoice to perform pertinent analyses that would be intended to bound prospective exposure (in terms of frequency and potential overall cost) related to negative pricing.

When RMEA pursues future supply agreements that could expose the organization to such risk, and before such procurement opportunities are executed, RMEA would consult with CalChoice to perform pertinent analyses that will be intended to bound prospective exposure (in terms of frequency and potential overall cost) related to negative pricing. Based on information/data derived through such analyses, RMEA would coordinate with CalChoice and its scheduling coordinator to develop a bidding strategy, if deemed necessary, that would create desired limitations to such negative price risk, acknowledging however, that any curtailment decisions (related to negative pricing) would reduce the expected quantity of renewable energy to be received from such contracts – such circumstances could necessitate supplemental procurement, if meaningful delivery shortfalls occur.

As for lessons learned from other retail sellers, RMEA continues to be aware that negative pricing can be particularly punitive in certain geographic regions, so it will need to carefully evaluate any new renewable supply opportunities in consideration of such risk or pursue contract structures – RMEA is aware that pursuing firm/fixed delivery quantities, as opposed to as-available supply arrangements, can meaningfully reduce, if not entirely eliminate,

concerns related to negative pricing (and related decisions to pursue curtailment). If RMEA gains additional insight based on future experience/exposure to negative pricing, it will share such information, if required to do so, in a future RPS Procurement Plan.

#### **XIII.4. Direct Costs Incurred, to Date, for Incidences of Overgeneration and Associated Negative Market Prices**

To date, RMEA's renewable energy procurement efforts and associated contracts have not resulted in the accrual of direct costs related to incidences of overgeneration resulting from negative pricing.

#### **XIII.5. An Overall Strategy for Managing the Overall Cost Impact of Increasing Incidences of Overgeneration and Negative Market Prices**

While curtailment is a viable renewable integration strategy that may be more cost-effective than other options, there are potential negative consequences from excessive curtailment. Curtailment of solar and wind represents a lost opportunity to generate zero GHG emitting electricity, and excessive curtailment could impact the ability of the state to meet its environmental and energy policy goals. Additionally, these over-supply situations expose ratepayers to increased costs because their load serving entities must either economically curtail the generating resource (and often pay for the electricity that was not generated) or generate power and be exposed to negative prices. Because these conditions are largely driven by state policy, it is appropriate to consider macro-level mitigation measures through CAISO initiatives, Commission rulemakings, and possibly even legislation. There are a number of measures and policies that have already been implemented or are currently being pursued that will have significant impacts on how substantial curtailment will be in the future. This includes the expansion of the Energy Imbalance Market, improvements to the CAISO market design and structure, enhanced forecasting capabilities, time of use rates, improved electric vehicle charging

functionalities, and smart deployment of distributed energy resources. The Commission's Integrated Resource Plan ("IRP") proceeding will be an appropriate forum to measure the impact of these policies and the effect that they will have on future curtailment. These new measures will need to be modeled and incorporated into forecasts of future curtailment.

RMEA will consider the impact of curtailment and negative pricing on its individual portfolio and will factor potential curtailment into its long-term planning, as appropriate. Due to the difficulty in accurately forecasting curtailment, RMEA will review available historical data on curtailment and negative pricing within regions where RMEA may contract for renewable generating resources – RMEA notes, however, that it only recently began taking energy deliveries under a contract that subject its organization to curtailment risk, so RMEA is currently gathering information regarding its early-stage experiences to determine whether additional analysis will be necessary; ~~as with~~ RMEA ~~taking~~ ~~readies itself to take~~ additional renewable energy deliveries in 2022 (from more recently executed supply agreements with market-based settlement mechanisms), it will more closely monitor historical market prices in proximity to related generating facilities – if instances of negative pricing become more prevalent at nodes adjacent to active project sites, RMEA may impute risk-related adjustments in its planning assumptions. In future contracting efforts, RMEA will remain aware of curtailment risk (stemming from instances of over-generation and related negative pricing) and will evaluate pertinent data to better understand the potential frequency of curtailment activities, including an assessment of historical pricing related to the point(s) of delivery that will be applicable in such supply agreements. While RMEA has not yet developed an individualized forecast of future curtailment for any particular project opportunity or technology type, RMEA will factor potential curtailment into its minimum margin of procurement (described in Section IX) and may also factor this

consideration in future iterations of its Risk Assessment (Section VII). To the extent that RMEA is engaged in renewable supply agreements which include curtailment provisions, it will take actions to limit the impacts of curtailment on its ratepayers and progress in meeting pertinent compliance mandates. During its current and future renewable contracting efforts, RMEA will continue to pursue contract terms that recognize and limit the potential financial impacts of negative pricing and provide RMEA greater flexibility to direct economic curtailment, if this becomes necessary.

#### **XIII.6. Contract Terms Included in RPS Contracts Intended to Reduce the Likelihood of Curtailment or Protect Against Negative Prices.**

As discussed previously, the City has incorporated terms in its contracts to limit consequences from negative prices. These include contracts with fixed quantities of RPS resources, and contracts with penalties for failure to deliver required amounts of RPS energy. An example of such language included in City contracts is:

**Guaranteed Energy Production:** Seller shall be required to deliver to Buyer no less than the Guaranteed Energy Production (as defined below) in each two (2) Contract Year block (as opposed to rolling) period during the Delivery Term (“**Performance Measurement Period**”). “**Guaranteed Energy Production**” means an amount of Product, as measured in MWh, equal to one-hundred fifty percent (150% of the average Expected Energy (as set forth on the Cover Sheet) for each Performance Measurement Period. The calculation will be performed once each Performance Measurement Period, beginning with the second anniversary of the Delivery Term Start Date.

#### **XIV. Cost Quantification**

RMEA has provided an updated Cost Quantification Table as Appendix E, which reflects renewable energy supply commitments that have been executed since submittal of its Final ~~2020-~~

[2021](#) RPS Procurement Plan. Pursuant to direction in the ACR, the City has entered pertinent data in Appendix E. Pursuant to the direction in the ACR, RMEA has completed those cells in the Cost Quantification table that correspond to Table 3, Rows 1-5 in the ACR.

## **XV. Coordination with Integrated Resource Planning Proceeding**

The resources identified in this RPS Procurement Plan are consistent with the resources identified in RMEA's [most recent](#) IRP, which was approved by RMEA's governing board and provided to the Commission for certification on September 1, 2020. As required by the ACR,<sup>10</sup> RMEA includes the following table that describes how RMEA's ~~2021~~[2022](#) RPS Procurement Plan conforms with the determinations made in the IRP Proceedings (R.16-02-007 and R.20-05-003). ~~Energy Division recently provided the draft resource data template on June 17, 2021. The final resource data template is expected to be released on/around July 1, 2021 with a related update required by August 31, 2021.~~ As required, RMEA will highlight the interrelationships of its RPS and IRP planning processes in a future iteration of this RPS Procurement Plan. The following table reflects RMEA's most recent updates, as reflected in ~~its Final 2020~~[this](#) RPS Procurement Plan, regarding RPS alignment with the IRP process.

IRP Section Subsection	RPS Alignment in IRP	
<b>III. Study Results</b> <b>A. Conforming and Alternative Portfolios</b>	Retail sellers should explain how the RPS resources they plan to procure, outlined in their RPS Plan, will align with each of their Conforming Portfolios being developed in their <del>2020</del> IRP Plans for Commission approval and certification. This should include:	
	<i>1. Existing RPS resources that the retail seller owns or contracts.</i>	The City continues to engage in renewable energy contracting efforts and expects to continue participating in/administering such procurement processes, via its relationship with CalChoice, to

<sup>10</sup> ACR at 30-33.

	<p>2. Existing RPS resources that the retail seller plans to contract with in the future.</p> <p>3. New RPS resources that the retail seller plans to invest in.</p> <p><a href="#"><u>4. New and existing resources that will be used to meet Mid-Term Reliability obligations adopted in D.21-06-035.</u></a></p>	<p>augment current RPS supply commitments and further progress towards the emission metrics reflected in the City's IRP.</p> <p>As part of its 2020 IRP filing, the City submitted two Preferred Conforming Portfolios that achieve its proportional share of both the 46 and 38 MMT GHG targets. Under each of these portfolios, the City's anticipated use of new and existing resources were added to the portfolio to achieve the relevant GHG targets as well as RPS procurement requirements, including the 65% long-term contracting requirement.</p> <p><a href="#"><u>For the 2022 IRP filings, the June 15, 2022 Administrative Law Judge's Ruling Finalizing Load Forecasts and Greenhouse Gas Emissions Benchmarks for 2022 Integrated Resource Plan Filings indicates that the IRP filings should be planning for 2035 as the target year and adopts planning targets of 30 MMT and 25 MMT. These are in addition to the requirements in D.22-02-004 which require LSEs to meet their proportional share of the 2030 target of 38 MMT and plan for a 2030 target of 30 MMT.</u></a></p> <p>Description of <a href="#"><u>2020</u></a> Preferred Conforming Portfolios:</p> <ul style="list-style-type: none"> <li>• 46 MMT Conforming Portfolio: Portfolio that achieves the City's proportional share of a 46 MMT statewide GHG target <ul style="list-style-type: none"> <li>○ The 46 MMT Conforming Portfolio assumed the use of RPS resources currently reflected in the City's supply portfolio, as further described in other submittals to the Commission and this RPS Procurement Plan, as well as the other new RPS resources, which were deemed necessary to achieve pertinent emission parameters associated with the 46 MMT Conforming Portfolio. In aggregate, these new RPS resource would include: 15 MW of new solar; and 13 MW of new wind</li> <li>○ Future contracts with the following additional existing RPS resources were also deemed necessary to meet</li> </ul> </li> </ul>
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		<p>pertinent emission parameters associated with the 46 MMT Conforming Portfolio. In aggregate, these existing RPS resource would include: 1 MW biomass; 5 MW small hydro; and 15 MW wind</p> <ul style="list-style-type: none"> <li>○ The City's 46 MMT portfolio conformed to the procurement timing, resource quantities, and general resource attributes identified in the 46 MMT reference system plan</li> </ul> <ul style="list-style-type: none"> <li>● 38 MMT Conforming Portfolio: Portfolio that achieves the City's proportional share of a 38 MMT statewide GHG target <ul style="list-style-type: none"> <li>○ The 38 MMT Conforming Portfolio assumed the use of RPS resources currently reflected in the City's supply portfolio, as further described in other submittals to the Commission and this RPS Procurement Plan, as well as the following new RPS resources, which were deemed necessary to achieve pertinent emission parameters associated with the 38 MMT Conforming Portfolio. In aggregate, these new RPS resource would include: 15 MW of new solar; and 13 MW of new wind</li> <li>○ Future contracts with the following additional existing RPS resources were also deemed necessary to meet pertinent emission parameters associated with the 38 MMT Conforming Portfolio. In aggregate, these existing RPS resource would include: 1 MW biomass; 5 MW small hydro; and 15 MW wind</li> <li>○ The City's 38 MMT portfolio conformed to the procurement timing, resource quantities, and general resource attributes identified in the 38 MMT reference system plan</li> </ul> </li> </ul> <p><a href="#">Description of 2022 Preferred Conforming</a></p>
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		<p><u>Portfolios:</u></p> <ul style="list-style-type: none"> <li>• <u>38 MMT in 2030 and 30 MMT in 2035 Conforming Portfolio</u> <ul style="list-style-type: none"> <li>○ <u>This is a continuance of the 38 MMT portfolio from the 2020 IRP. It is anticipated at this time that the contracts outlined above will continue to be sufficient</u></li> </ul> </li> <li>• <u>30 MMT in 2030 and 25 MMT in 2035 Conforming Portfolio:</u> <ul style="list-style-type: none"> <li>○ <u>The City is only beginning to determine how it plans on meeting this new, lower GHG requirement. The City anticipates that the procurement required will be similar to the outlines discussed above to meet the 38 MMT portfolio from the 2020 IRP.</u></li> </ul> </li> </ul> <p><u>Meeting the Mid-Term Reliability obligations from D.21-06-035:</u></p> <ul style="list-style-type: none"> <li>• <u>The City is participating in the Joint CalChoice, Desert Community Energy Authority, and Clean Energy Alliance Mid-Term Reliability Request for Proposals. Currently, negotiations are ongoing with short-listed resources.</u></li> </ul> <p style="text-align: center;">⊖</p>
<b>IV. Action Plan</b> <b>A. Proposed Activities</b>	Retail sellers should describe how they propose to use RPS resources to implement both Conforming Portfolios. Narratives should include:	
	<i>1. Proposed RPS procurement activities as required by Commission decision or mandated procurement.</i>  <i>2. Procurement plans, potential barriers, and resource viability for each new RPS resource identified.</i>	<p>To ensure compliance with its GHG and RPS targets, the City plans to substantially rely on GHG-free and RPS-eligible resources while contributing to statewide reliability requirements and responsibly managing overall portfolio costs. This approach is generally consistent between the 46 MMT Conforming Portfolio and 38 MMT Conforming Portfolio <u>in the 2020 IRP Plan, as well as the 30 MMT and 25 MMT portfolios required to be included in the 2022 IRP Plan.</u></p> <p>The City’s compliance with the IRP incremental procurement obligation required by D.19-11-016 will be met through existing contracts, as further</p>

		<p>detailed in the City’s IRP. The contracted set of resources totals 6.2 MW, which exceeds the City’s 4.8 MW incremental capacity requirement, and certain portions are already online with the required balance of such incremental capacity expected to be online by the noted August 1<sup>st</sup> deadlines in 2021, 2022 and 2023.</p> <p><u>As discussed above, the City’s compliance with the Mid-term Reliability decision required procurement is on-going. The City’s total requirements from the decision are 18 MW, including 1.5 MW of Long Lead Time resources, and 4 MW of zero-emitting capacity by 2025.</u></p> <p>The City expects that additional renewable energy resources will be needed to align actual and IRP-related procurement and fulfill general RPS procurement obligations of the City, including requisite long-term RPS contracting requirements. The City will participate in additional RPS solicitation activities, as administered by CalChoice, to address the balance of its RPS and IRP-related resource needs. Such solicitations are <u>ongoing and will occur</u> <del>expected to occur later in 2021 and as-needed thereafter</del>, based on the City’s evolving open positions. The City will keep the Commission apprised regarding such procurement activities and will update future RPS and IRP planning documents in consideration of related resource acquisitions.</p> <p>In consideration of the City’s relatively small sales volume and related resource needs, there are no eminent barriers or concerns regarding resource viability that are expected to compromise the City’s achievement of RPS or emission-related compliance obligations.</p>
<b>IV. Action Plan</b> <b>B. Procurement Activities</b>	The retail seller should describe the solicitation strategies for the RPS resources that will be included in both Conforming Portfolios. This description should include:	
	<ol style="list-style-type: none"> <li>1. <i>The type of solicitation.</i></li> <li>2. <i>The timeline for each solicitation.</i></li> <li>3. <i>Desired online dates.</i></li> </ol>	The City may participate in distinct solicitations for different products (for example: specific renewable energy products, generating resources or storage infrastructure), or it may choose to solicit multiple products in the same solicitation. These

	<p>4. Other relevant procurement planning information, such as solicitation goals and objectives.</p>	<p>solicitations will be competitive and may be similar to the City’s previous long-term RPS solicitations, which were described elsewhere in this RPS Procurement Plan.</p> <p>The City will administer future solicitations, as necessary, to promote consistency with the resource development plan identified in the IRP (for purposes of promoting achievement with state mandated RPS targets as well as the City’s internal targets). As noted above, the City anticipates administering upcoming solicitation activities consistent with the process and timeline described above. The City <u>is currently in the process of procuring resources that will meet the Mid-Term Reliability needs, with an additional</u> <del>will likely administer such a solicitation later in 2021 with</del> goal of procuring additional RPS-eligible renewable energy that will further achievement of RPS compliance mandates, including applicable long-term contracting requirements</p> <p>During administration of future procurement processes, the City will utilize the evaluative and contract management processes (further described above in Section X and elsewhere in this Plan) to promote timely project completion and improve planning certainty.</p>
<p><b>IV. Action Plan</b></p> <p><b>C. Potential Barriers</b></p>	<p>Retail sellers should provide a summary of the potential barriers to implementing both Conforming Portfolios as they relate to RPS resources. The section should include:</p>	
	<p>1. Key market, regulatory, financial, or other resource viability barriers or risks associated with the RPS resources coming online in both retail sellers’ <del>Conforming</del> <u>Preferred</u> Portfolios.</p> <p>2. Key risks associated with the potential retirement of existing RPS resources on which the retail seller intends to rely in the future.</p>	<p>The City does not expect any procurement barriers to impede its future contracting for new or existing renewable energy resources, but notes that even though a balanced, diverse RPS portfolio is desirable, the limited resource availability and lead time required for some technology types may necessitate planning flexibility. The key risk affecting the City’s achievement of the 46 MMT and 38 MMT Preferred Conforming IRP Portfolios <u>in the 2020 IRP Plan and the 30 MMT and 25 MMT portfolios in the 2022 plan</u> is reliance on new resources – while the City intends to contract with highly experienced and qualified project developers (when new-build resources are deemed necessary),</p>

	<p>there is always a limited risk of project failure.</p> <p>In consideration of the City’s growing renewable energy commitments and the relatively manageable level of incremental RPS procurement that would be required to meet parameters of the <del>46 MMT and 38 MMT</del> Preferred Conforming IRP Portfolios, it does not have any substantive concerns regarding its ability to fulfill achieve levels of renewable energy procurement that will be required to satisfy pertinent RPS mandates or IRP targets. If the City’s impression happens to change over time, it will accordingly advise the Commission in a subsequent update to this RPS planning process.</p>
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Dated: ~~February 17~~ June 30, 2022

Respectfully submitted,

/s/ Isaiah Hagerman

Isaiah Hagerman  
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City of Rancho Mirage  
69-825 Highway 111  
Rancho Mirage, CA 92270  
(760) 324-4511  
isaiahh@RanchoMirageCA.gov

## **Appendix B**

### **2022 RPS Procurement Plan Checklist and Verification**

### Draft 2022 RPS Procurement Plan Checklist- Task Completed

<b>Retail seller name: City of Rancho Mirage</b>	<b>YES/NO</b>	<b>NOTES</b>
I. Major Changes to RPS Plan	YES	
II. Executive Summary	YES	
III. Summary of Legislation Compliance	YES	
IV. Assessment of RPS Portfolio Supplies and Demand	YES	
IV.A. Portfolio Supply and Demand	YES	
IV.A.1. Voluntary Allocation and Market Offer (VAMO)	YES	
IV.A.2. Portfolio Optimization	YES	
IV.B. Responsive to Policies, Regulations, and Statutes	YES	
IV.B.1 Long-term Procurement	YES	
IV.C. Portfolio Diversity and Reliability	YES	
IV.D. Lessons Learned	YES	
V. Project Development Status Update	YES	
VI. Potential Compliance Delays	YES	
VII. Risk Assessment	YES	
VIII. Renewable Net Short Calculation	YES	
IX. Minimum Margin of Procurement (MMoP)	YES	
IX.A. MMoP Methodology and Inputs	YES	
IX.B. MMoP Scenarios	YES	
X. Bid Solicitation Protocol	YES	
X.A. Solicitation Protocols for Renewables Sales	YES	
X.B. Bid Selection Protocols	YES	
X.C. LCBF Criteria	YES	
XI. Safety Considerations	YES	
XII. Consideration of Price Adjustments Mechanisms	YES	
XIII. Curtailment Frequency, Forecasting, Costs	YES	
XIV. Cost Quantification	YES	
XV. Coordination with the IRP Proceeding	YES	
Appendix A: Redlined Version of the Final 2021 RPS Plan	YES	

### **Officer Verification**

I am an officer of the reporting organization herein and am authorized to make this verification on its behalf. The statements in the foregoing document are true of my own knowledge, except as to matters which are therein stated on information or belief, and as to those matters, I believe them to be true. The spreadsheet templates used within this filing have not been altered from the version issued or approved by Energy Division.

Executed on June 30, 2022 at Rancho Mirage, California.

/s/ Isaiah Hagerman

Isaiah Hagerman  
City Manager  
City of Rancho Mirage  
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## **Appendix C**

### **Renewable Net Short Calculation**

Renewable Net Short Calculations - 2022 RPS Procurement Plans

LSE Name:	City of Rancho Mirage
Date Filed:	6/30/22

Input required

No input required

Hard-coded

Variable	Calculation	Item	2017 Actual	2018 Actual	2019 Actual	2020 Actual	2017-2020	2021 Actual	2022 Forecast	2023 Forecast	2024 Forecast	2021-2024	2025 Forecast	2026 Forecast	2027 Forecast	2025-2027
		Forecast Year					CP 3		1	2	3	CP 4	4	5	6	CP 5
		Annual RPS Requirement														
A		Total Retail Sales (MWh)		206,500	273,405	279,664	759,570	276,518	282,306	283,717	285,136	1,127,677	286,562	287,994	289,434	863,990
B		RPS Procurement Quantity Requirement (%)	27.0%	29.0%	31.0%	33.0%	31.2%	33.8%	38.5%	41.3%	44.0%	39.9%	46.7%	49.3%	52.0%	49.3%
C	A*B	Gross RPS Procurement Quantity Requirement (MWh)	-	59,885	84,756	92,289	236,930.0	98,855	108,688	117,033	125,460	450,035.9	133,738	142,068	150,506	426,311.7
D		Voluntary Margin of Over-procurement (MWh)		12,390	10,936	5,593	28,920					-				-
E	C+D	Net RPS Procurement Need (MWh)	-	72,275	95,692	97,883	265,850	98,855	108,688	117,033	125,460	450,036	133,738	142,068	150,506	426,312
		RPS-Eligible Procurement														
Fa		Risk-Adjusted RECs from Online Generation (MWh)		74,788	119,500	90,000	284,288	111,221	115,305	100,473	95,818	422,817	93,818	93,818	93,818	281,454
Faa		Forecast Failure Rate for Online Generation (%)					#DIV/0!		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Fb		Risk-Adjusted RECs from RPS Facilities in Development (MWh)					-					-				-
Fbb		Forecast Failure Rate for RPS Facilities in Development (%)					#DIV/0!					#DIV/0!				#DIV/0!
Fc		Pre-Approved Generic RECs (MWh)					-					-				-
Fd		Executed REC Sales (MWh)					-					-				-
F	Fa+Fb+Fc-Fd	Total RPS Eligible Procurement (MWh)	-	74,788	119,500	90,000	284,288	111,221	115,305	100,473	95,818	422,817	93,818	93,818	93,818	281,454
F0		Category 0 RECs					-					-				-
F1		Category 1 RECs		42,788	78,500	75,000	196,288	76,872	82,425	67,593	77,938	304,828	75,938	75,938	75,938	227,814
F2		Category 2 RECs		8,000	20,000	15,000	43,000	16,668	15,000	15,000		46,668				-
F3		Category 3 RECs		24,000	21,000	-	45,000	17,681	17,880	17,880	17,880	71,321	17,880	17,880	17,880	53,640
		Gross RPS Position (Physical Net Short)														
Ga	F-E	Annual Gross RPS Position (MWh)	-	2,513	23,808	(7,883)	18,438	12,366	6,617	(16,560)	(29,642)	(27,219)	(39,920)	(48,250)	(56,688)	(144,858)
Gb	F/A	Annual Gross RPS Position (%)	0%	36%	44%	32%	37%	40%	41%	35%	34%	37%	33%	33%	32%	33%
		Application of Bank														
Ha	J-Hc (from previous CP)	Existing Banked RECs above the PQR					-	-				-	-			-
Hb		RECs above the PQR added to Bank					-					-				-
Hc		Non-bankable RECs above the PQR					-					-				-
H	Ha+Hb	Gross Balance of RECs above the PQR	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ia		Planned Application of RECs above the PQR towards RPS Compliance					-					-				-
Ib		Planned Sales of RECs above the PQR					-					-				-
J	H-Ia-Ib	Net Balance of RECs above the PQR	-	-	-	-	-	-	-	-	-	-	-	-	-	-
J0		Category 0 RECs					-					-				-
J1		Category 1 RECs					-					-				-
J2		Category 2 RECs					-					-				-
		Expiring Contracts														
K		RECs from Expiring RPS Contracts (MWh)		9,788	101,500	90,000	201,288	38,000	27,000	15,000		80,000				-
		Net RPS Position (Optimized Net Short)														
La	Ga+Ia-Ib-Hc	Annual Net RPS Position after Bank Optimization (MWh)	-	2,513	23,808	(7,883)	18,438	12,366	6,617	(16,560)	(29,642)	(27,219)	(39,920)	(48,250)	(56,688)	(144,858)
Lb	(F+Ia-Ib-Hc)/A	Annual Net RPS Position after Bank Optimization (%)	#DIV/0!	0.362168754	0.437079844	0.32181435	0.374274824	0.402220183	0.408440164	0.354130726	0.33604333	0.374945282	0.327392169	0.325763352	0.324142639	0.325760651

Note: All values are to be input in MWhs

## Renewable Net Short Calculations - 2022 RPS Procurement Plans

<b>LSE Name:</b>	City of Rancho Mirage
<b>Date Filed:</b>	6/30/22

Variable	Calculation	Item	2028 Forecast	2029 Forecast	2030 Forecast	2028-2030	2031 Forecast	2032 Forecast
		Forecast Year	7	8	9	CP 6	10	11
		<b>Annual RPS Requirement</b>						
A		Total Retail Sales (MWh)	290,881	292,336	293,798	877,015	295,267	296,743
B		RPS Procurement Quantity Requirement (%)	54.7%	57.3%	60.0%	57.3%	60.0%	60.0%
C	A*B	Gross RPS Procurement Quantity Requirement (MWh)	159,025	167,596	176,279	502,899.6	177,160	178,046
D		Voluntary Margin of Over-procurement (MWh)				-		
E	C+D	Net RPS Procurement Need (MWh)	159,025	167,596	176,279	502,900	177,160	178,046
		<b>RPS-Eligible Procurement</b>						
Fa		Risk-Adjusted RECs from Online Generation (MWh)	93,818	93,818	93,818	281,454	46,538	43,538
Faa		Forecast Failure Rate for Online Generation (%)	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Fb		Risk-Adjusted RECs from RPS Facilities in Development (MWh)				-		
Fbb		Forecast Failure Rate for RPS Facilities in Development (%)				#DIV/0!		
Fc		Pre-Approved Generic RECs (MWh)				-		
Fd		Executed REC Sales (MWh)				-		
F	Fa+Fb+Fc-Fd	Total RPS Eligible Procurement (MWh)	93,818	93,818	93,818	281,454	46,538	43,538
F0		Category 0 RECs				-		
F1		Category 1 RECs	75,938	75,938	75,938	227,814	46,538	43,538
F2		Category 2 RECs				-		
F3		Category 3 RECs	17,880	17,880	17,880	53,640		
		<b>Gross RPS Position (Physical Net Short)</b>						
Ga	F-E	Annual Gross RPS Position (MWh)	(65,207)	(73,778)	(82,461)	(221,446)	(130,622)	(134,508)
Gb	F/A	Annual Gross RPS Position (%)	32%	32%	32%	32%	16%	15%
		<b>Application of Bank</b>						
Ha	J-Hc (from previous CP)	Existing Banked RECs above the PQR	-			-	-	
Hb		RECs above the PQR added to Bank				-		
Hc		Non-bankable RECs above the PQR				-		
H	Ha+Hb	Gross Balance of RECs above the PQR	-	-	-	-	-	-
Ia		Planned Application of RECs above the PQR towards RPS Compliance				-		
Ib		Planned Sales of RECs above the PQR				-		
J	H-Ia-Ib	Net Balance of RECs above the PQR	-	-	-	-	-	-
J0		Category 0 RECs				-		
J1		Category 1 RECs				-		
J2		Category 2 RECs				-		
		<b>Expiring Contracts</b>						
K		RECs from Expiring RPS Contracts (MWh)			47,280	47,280	3,000	20,290
		<b>Net RPS Position (Optimized Net Short)</b>						
La	Ga+Ia-Ib-Hc	Annual Net RPS Position after Bank Optimization (MWh)	(65,207)	(73,778)	(82,461)	(221,446)	(130,622)	(134,508)
Lb	(I+Ia-Ib-Hc)/A	Annual Net RPS Position after Bank Optimization (%)	0.322529989	0.320925362	0.319328718	0.320922701	0.157613517	0.146719608

Note: All values are to be input in MWhs

## **Appendix D**

### **Project Development Status Update**

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

# **Appendix E**

## **Cost Quantification**

<b>LSE Name:</b>	City of Rancho Mirage
<b>Date Filed:</b>	6/30/22

Input Required

Table 1: Cost Quantification (Actual Net Costs, \$)		Actual RPS-Eligible Procurement and Generation Net Costs (\$)		
1	Executed RPS-Eligible Contracts by Technology Type* (Purchases and Sales)	2019	2020	2021
2	Biogas: Digester Gas			
3	Biogas: Landfill Gas	\$606,848		
4	Biodiesel			
5	Biomass	\$2,429,994	\$835,882	\$331,458.54
6	Muni Solid Waste			
7	Geothermal	\$1,287,859	\$2,930,595	\$1,662,705.56
8	Small Hydro (Non-UOG)		\$194,451	
9	Conduit Hydro			
10	Water Supply / Conveyance			
11	Ocean Wave			
12	Ocean Thermal			
13	Tidal Current			
14	Solar PV (Non-UOG)	\$69,197	\$372,430	\$999,454.77
15	Solar Thermal			\$200,665.00
16	Wind	\$804,966	\$9,768	\$2,455,162.16
17	Unbundled RECs (REC Only)	\$36,900		\$43,793.90
18	Various (Index Plus REC)***			
19	Fuel Cell			
20	UOG: Small Hydro			
21	UOG: Solar PV			
22	UOG: Other			
23	Executed REC Sales (Revenue)			
24	<b>Total RPS-Eligible Procurement and Generation Net Cost</b>	<b>\$5,235,764</b>	<b>\$4,343,126</b>	<b>\$5,693,240</b>
25	Total Retail Sales (MWh)	273,405.42	279,664	276,517.70
26	<b>Incremental Rate Impact</b>	<b>1.915018488</b>	<b>1.552978167</b>	<b>2.058906149</b>

LSE Name: City of Rancho Mirage  
Date Filed: 6/30/22

Input Required

No Input Required

Table 2: Cost Quantification (Forecast Costs and Revenues, \$)		Forecast RPS-Eligible Procurement Costs and Revenues (\$)										
1	Executed But Not Approved RPS-Eligible Contracts (Purchases and Sales)**	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
2	Biogas: Digester Gas											
3	Biogas: Landfill Gas											
4	Biodiesel											
5	Biomass											
6	Muni Solid Waste											
7	Geothermal											
8	Small Hydro (Non-UOG)											
9	Conduit Hydro											
10	Water Supply / Conveyance											
11	Ocean Wave											
12	Ocean Thermal											
13	Tidal Current											
14	Solar PV (Non-UOG)											
15	Solar Thermal											
16	Wind											
17	Unbundled RECs (REC Only)											
18	Various (Index Plus REC)***											
20	Fuel Cell											
21	UOG: Small Hydro											
22	UOG: Solar PV											
23	UOG: Other											
24	Executed REC Sales (Revenue)											
25	Total Executed But Not Approved RPS-Eligible Procurement and Generation Cost	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
26	Total Retail Sales (MWh)	282,305.73	283,717.26	285,135.85	286,561.53	287,994.34	289,434.31	290,881.48	292,335.89	293,797.57	295,266.55	296,742.89
27	Incremental Rate Impact	0	0.00 ¢/kWh	0.00 ¢/kWh	0.00 ¢/kWh	0.00 ¢/kWh	0.00 ¢/kWh	0.00 ¢/kWh	0.00 ¢/kWh	0.00 ¢/kWh	0.00 ¢/kWh	0.00 ¢/kWh
28	Executed RPS-Eligible Contracts (Purchases and Sales)****	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
29	Biogas: Digester Gas											
30	Biogas: Landfill Gas											
31	Biodiesel											
32	Biomass											
33	Muni Solid Waste											
34	Geothermal											
35	Small Hydro (Non-UOG)											
36	Conduit Hydro											
37	Water Supply / Conveyance											
38	Ocean Wave											
39	Ocean Thermal											
40	Tidal Current											
41	Solar PV (Non-UOG)	\$1,042,289	\$969,773	\$827,229	\$778,746	\$741,740	\$696,360	\$701,565	\$706,822	\$712,131		
42	Solar Thermal											
43	Wind	\$2,596,048	\$2,972,370	\$3,577,049	\$3,489,701	\$3,387,767	\$3,287,292	\$3,298,816	\$3,310,455	\$3,322,211	\$2,436,334	\$2,448,326
44	Unbundled RECs (REC Only)	\$44,407	\$44,642	\$44,878	\$45,113	\$45,348	\$45,583	\$45,818	\$46,052	\$46,287		
45	Various (Index Plus REC)***	\$3,725,375	\$1,725,087	\$387,689	\$218,749	\$208,176	\$195,210	\$195,697	\$198,199	\$199,716	\$201,248	
47	Fuel Cell											
48	UOG: Small Hydro											
49	UOG: Solar PV											
50	UOG: Other											
51	Executed REC Sales (Revenue)											
52	Total Executed and Approved RPS-Eligible Procurement and Generation Cost	\$7,378,120	\$5,711,874	\$4,836,825	\$4,512,309	\$4,383,030	\$4,224,445	\$4,242,896	\$4,261,588	\$4,280,406	\$2,637,582	\$2,448,326
53	Total Retail Sales (MWh)	282,306	283,717	285,136	286,562	287,994	289,434	290,881	292,336	293,798	295,267	296,743
54	Incremental Rate Impact	2.613520962	2.01322745	1.696322936	1.574638663	1.521915377	1.499552275	1.458634017	1.457771195	1.456923463	0.893288522	0.82506644
55	Total RPS-Eligible Procurement and Generation Cost	\$7,378,120	\$5,711,874	\$4,836,825	\$4,512,309	\$4,383,030	\$4,224,445	\$4,242,896	\$4,261,588	\$4,280,406	\$2,637,582	\$2,448,326
56	Total Incremental Rate Impact	2.613520962	2.01322745	1.696322936	1.574638663	1.521915377	1.499552275	1.458634017	1.457771195	1.456923463	0.893288522	0.82506644

\*Note: Technology definitions are given in the POC Classification Handbook located in the RPS Compliance Reporting section of: <https://www.cpuc.ca.gov/RPSComplianceReporting/>  
\*\*Note: For contracts that have been executed but still require formal approval (CPUC or other formal approval process) for purchases and sales.  
\*\*\*Note: The "Various" technology type is to be used in the case of contracts encompassing multiple facilities where the generation type is not yet known  
\*\*\*\*Note: For IOUs and SMUs: Include all executed contracts that required CPUC approval. For CCAs and ESPs: Include all executed contracts that have been approved through relevant formal approval processes.

<b>LSE Name</b>	City of Rancho Mirage		Input Required	
<b>Date Filed</b>	6/30/22			

Table 3: Cost Quantification (Actual Procurement / Generation and Sales, MWh)		Actual RPS-Eligible Procurement / Generation and Sales (MWh)		
1	Technology Type* (Procurement / Generation and Sales)	2019	2020	2021
2	Biogas: Digester Gas			
3	Biogas: Landfill Gas	10,990		
4	Biodiesel			
5	Biomass	44,136	17,017	5,000
6	Muni Solid Waste			
7	Geothermal	23,374	58,749	25,332
8	Small Hydro (Non-UOG)		5,000	
9	Conduit Hydro			
10	Water Supply / Conveyance			
11	Ocean Wave			
12	Ocean Thermal			
13	Tidal Current			
14	Solar PV (Non-UOG)	1,581	8,998	14,500
15	Solar Thermal			3,027
16	Wind	18,419	236	45,681
17	Unbundled RECs (REC Only)	21,000		17,681
18	Various (Index Plus REC)***			
19	Fuel Cell			
20	UOG: Small Hydro			
21	UOG: Solar PV			
22	UOG: Other			
23	Executed REC Sales (MWh)			
24	Total RPS Eligible Procurement (MWh)	119,500	90,000	111,221

LSE Name City of Rancho Mirage Input Required No Input Required

Date Filed 6/30/22

Forecast RPS-Eligible Procurement / Generation and Sales (MWh)												
1	Executed But Not Approved RPS-Eligible Contracts (Purchases and Sales) **	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
2	Biogas: Digester Gas											
3	Biogas: Landfill Gas											
4	Biodiesel											
5	Biomass											
6	Muni Solid Waste											
7	Geothermal											
8	Small Hydro (Non-UOG)											
9	Conduit Hydro											
10	Water Supply / Conveyance											
11	Ocean Wave											
12	Ocean Thermal											
13	Total Current											
14	Solar PV (Non-UOG)											
15	Solar Thermal											
16	Wind											
17	Unbundled RECs (REC Only)											
18	Various (Index Plus REC)***											
20	Fuel Cell											
21	UOG: Small Hydro											
22	UOG: Solar PV											
23	UOG: Other											
24	Executed REC Sales (MWh)											
25	Total Executed But Not Approved RPS-Eligible Procurement	0	0	0	0	0	0	0	0	0	0	0
26	Executed and Approved RPS-Eligible Contracts (Purchases and Sales) ****	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
27	Biogas: Digester Gas											
28	Biogas: Landfill Gas											
29	Biodiesel											
30	Biomass											
31	Muni Solid Waste											
32	Geothermal											
33	Small Hydro (Non-UOG)											
34	Conduit Hydro											
35	Water Supply / Conveyance											
36	Ocean Wave											
37	Ocean Thermal											
38	Total Current											
39	Solar PV (Non-UOG)	10,500	10,500	10,500	10,500	10,500	10,500	10,500	10,500	10,500		
40	Solar Thermal											
41	Wind	46,925	52,063	62,438	62,438	62,438	62,438	62,438	62,438	62,438	43,538	43,538
42	Unbundled RECs (REC Only)	17,860	17,860	17,860	17,860	17,860	17,860	17,860	17,860	17,860		
43	Various (Index Plus REC)***	40,000	20,000	5,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	
45	Fuel Cell											
46	UOG: Small Hydro											
47	UOG: Solar PV											
48	UOG: Other											
49	Executed REC Sales (MWh)											
50	Total Executed and Approved RPS-Eligible Procurement	115,305	100,473	95,818	93,818	93,818	93,818	93,818	93,818	93,818	46,538	43,538
51	Total RPS Eligible Procurement (MWh)	115,305	100,473	95,818	93,818	93,818	93,818	93,818	93,818	93,818	46,538	43,538

\*\*Note: Technology definitions are given in the PCC Classification Handbook located in the RPS Compliance Reporting section of: <https://www.cpuc.ca.gov/RPSComplianceReporting/>

\*\*\*Note: For contracts that have been executed but still require formal approval (CPUC or other formal approval process) for purchases and sales.

\*\*\*\*Note: The "Various" technology type is to be used in the case of contracts encompassing multiple facilities where the generation type is not yet known.

\*\*\*\*\*Note: For IOUs and SMUs: Include all executed contracts that required CPUC approval. For CCAs and ESPs: Include all executed contracts that have been approved through relevant formal approval processes.